

Journal of the Royal Institute of British Architects

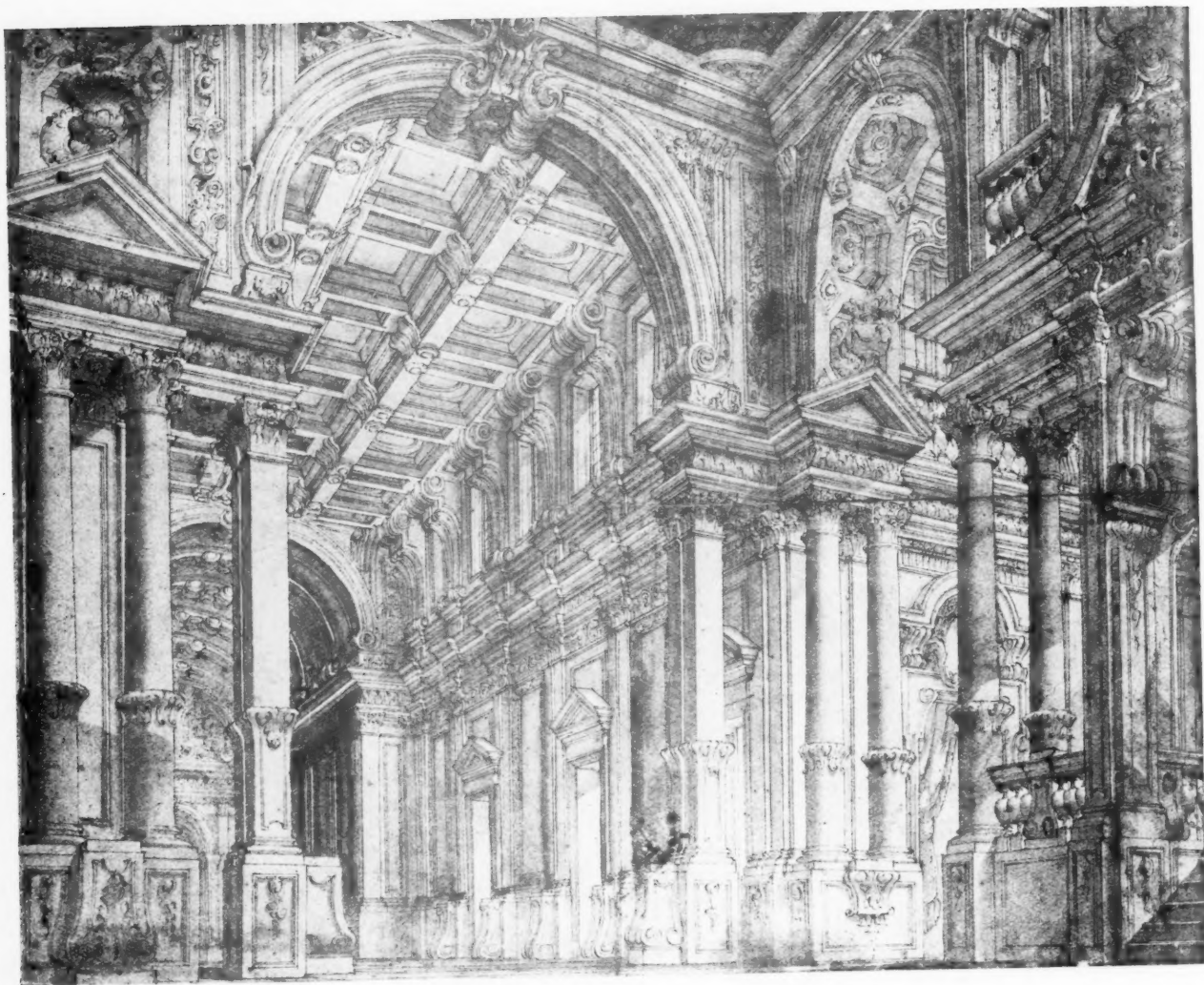
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FROM AN ORIGINAL DRAWING BY F. GALLI DA BIBIENA
From the R.I.B.A. Collection



GENERAL VIEW OF CATHEDRAL FROM CITY WATER TOWER

Lincoln Cathedral

BY SIR C. NICHOLSON [F.] AND SIR FRANCIS FOX [*Hon. Associate*].

[*Read before the Royal Institute of British Architects on Monday, 4 January 1926.*]

Part I

BY SIR CHARLES A. NICHOLSON, BART., M.A.

THE general history of Lincoln Cathedral is, I suppose, familiar to most of us. The oldest parts of the present fabric forming the sub-structure of the west front, are the work of Bishop Remigius and date from the first few years after the Norman Conquest. From the existence of these very considerable remains of Remigius's church it is evident that the whole building was completed in a very few years from the date of its commencement, for the west front was, it may be presumed, the last instalment of the work to be taken in hand.

Now it must have been no small undertaking to have built a first-class three-towered Norman church between 300 and 400 feet long in something like 20 or 25 years, and it is no wonder that we have found in the present generation that the masonry of Remigius's church is not solid enough to carry safely vast loads which have been piled upon it by twelfth, thirteenth and fourteenth century builders, or to do

work which it was never meant to do by its original designer.

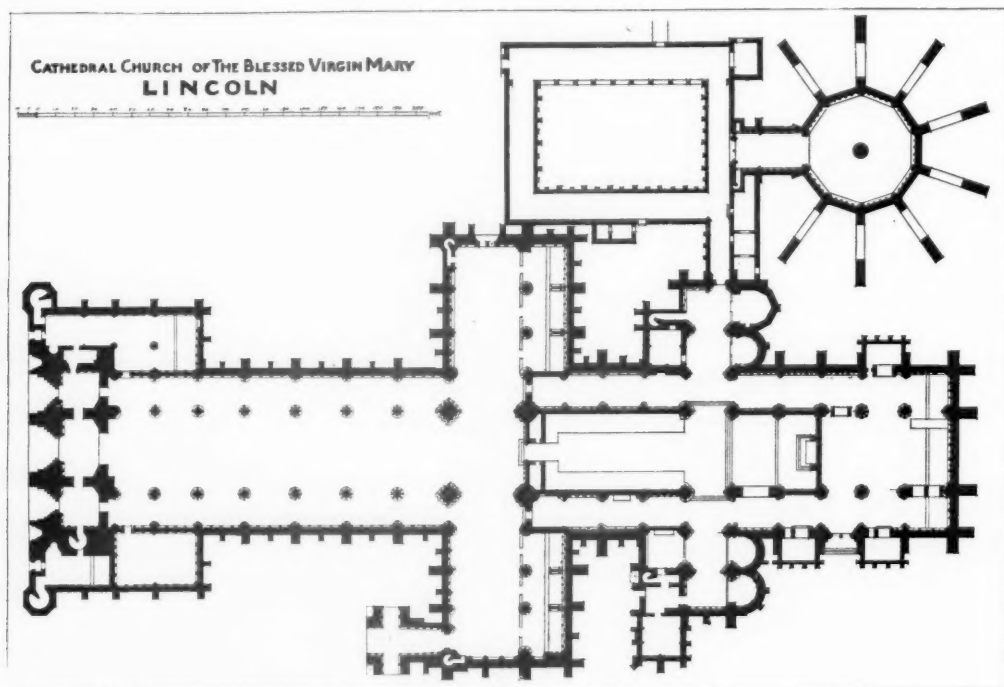
It is in this part of the cathedral that the present works of reinstatement were begun, and a few observations on the structure of the west front will therefore be of interest.

The original design of Remigius's towers and portals was very singular, the towers being flanked laterally and on the west side with short transeptal excrescences. These did not form an internal western transept like those of Ely and Peterborough, but were purely external features acting as buttresses to the towers. On the west side these quasi transepts were treated as deeply recessed porches of very considerable height. The northern one was not hollowed out into a porch but consisted of a series of chambers one above the other, these being a dungeon with what was probably a cesspit underneath it and a large loft above : the transept abutting on the south

tower contains a portion of a very roomy, winding staircase and there are chambers above the use of which is not quite clear. There appears, however, to have been some sort of a porch on this side. Remigius's west front remains fairly complete up to a height of 90 feet from the pavement. The north-west and south-west angles formed between the lateral and western transepts were filled in with masonry formed into semi-circular niches and there is a band of archaic sculpture round the piers on the

the thirteenth century, but the walls themselves are not of abnormal thickness and in parts are pierced with passages.

Reverting to the history of the building, the first alterations of Remigius's work were made by Bishop Alexander in the later Norman period. The three rich Romanesque west doorways were inserted at this time and the greater part of the nave was apparently reconstructed. The two west towers were carried up about 40 feet above the point at which



west side. Remigius's work is of the usual Norman construction, two thin skins of wide-jointed masonry filled up with poor lime concrete. And although there is a good bulk of masonry of this description on the outer sides of both the towers, the eastern walls and those facing the westernmost bay of the nave are of no great substance. In the recent grouting and reinforcing operations it has been necessary at times to drill boreholes into masonry some 20 feet thick. This has been the case with the abutments formed by the quasi transepts and those added in

Remigius left them and this work was designed in a comparatively light manner, the walls being double and pierced with three tiers of passages. This looks as if Bishop Alexander was not entirely satisfied with the solidity of Remigius's work. Alexander or his master mason must, however, have had considerable courage, as the nave of their cathedral was certainly designed to be vaulted in stone, the marks of its high vaults being still apparent on the inner faces of the towers towards the western bay of the nave. Authorities differ as to the date of the

high vaults at Durham, but these of Bishop Alexander at Lincoln may certainly be regarded as pioneer work, at any rate in England.

With the exception of the Norman portions of the west end the whole cathedral has been rebuilt in the thirteenth and following centuries. St. Hugh began this rebuilding with the quire, the eastern transepts, an apse with procession path and chapels, and part of the great transepts. His successors completed the great transept, rebuilt Bishop Alexander's nave and finally replaced St. Hugh's apse

roofed quire in a church, the nave of which had already been vaulted in stone by Bishop Alexander, I am bound to say that the more closely I examine the work attributed to St. Hugh the more I am inclined to accept Mr. Francis Bond's theories. That the aisle walls were thickened after their construction is, I think, practically certain, and the theory that the original scheme of the triforium and clerestory resembled that of St. John's, Chester, seems to me to be supported by very strong architectural evidence. Again, a close examination of the vault springers



WEST FRONT

with the square-ended extension known as the angel quire. I do not propose to try and describe these works at all fully as they are so well known already, but I may offer some observations upon certain details. First, with regard to St. Hugh's work, it will be remembered that a startling theory was propounded some 15 years ago by the late Francis Bond to the effect that St. Hugh's quire was not intended to be vaulted and that its interior design had been remodelled in order to adapt it to carry a stone vault. In spite of the inherent improbability of a bishop like St. Hugh being content with a wooden-

which has recently been possible reveals a great deal of roughly-executed masonry and irregular stone jointing which indicate that the high vaults have been contrived as best might be where no proper provision had originally been made for them.

A very remarkable feature of the thirteenth century work is the Rose window of the north transept, which is of almost incredible lightness and beauty of masonry. The plate tracery of this window is only 7 inches thick, and the work is in marvellous preservation.

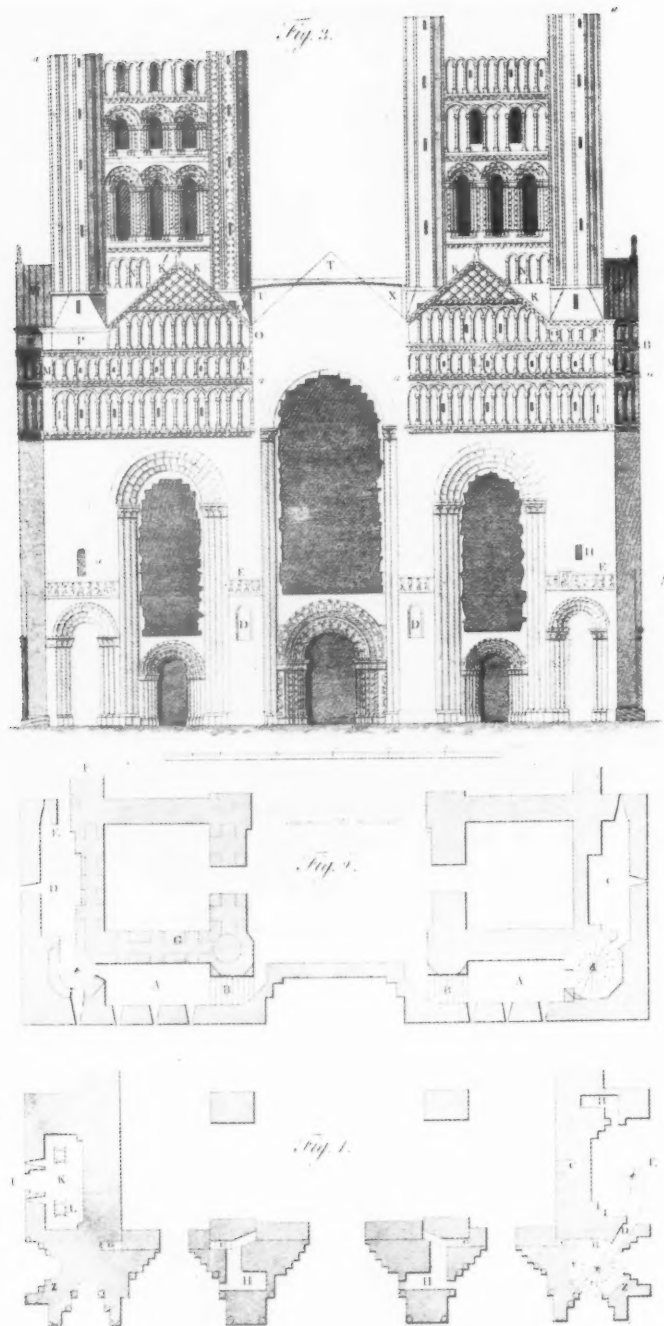
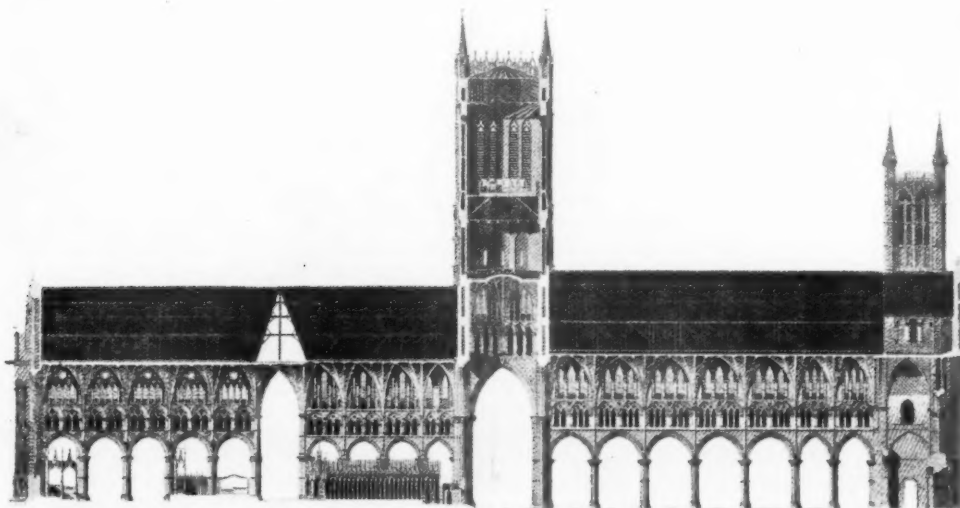


FIG. 3.—ELEVATION OF THE WEST FRONT OF ST. REMIGIUS'S CHURCH
FIGS. 1 AND 2.—PLANS AT VARIOUS LEVELS

The construction of the winding staircases in the eastern part of the church is very fine, the undersides of the steps being arched and parts of the staircases vaulted—one of these staircases leads to a little vaulted recess with a fragment of the old oak centering still adhering to the rubblework of the vault cell.

Then there are a charming thirteenth century lavatory in the south-east transept, a good crypt under the sacristy, and a most interesting chamber opening into the north-east transept lined with thir-

The work of remodelling the cathedral was carried on under Bishop Hugh of Wells, by the rebuilding of the nave. Here the details are less romantic than those of the quire and transepts but the construction is more substantial and practical. There is no evidence of experiment or of changes of mind on the part of the builders of the nave. The structure, moreover, is very well designed as a piece of engineering, the columns are small and compact, and the arches of very wide span. The work has stood very well on the



LONGITUDINAL SECTION

teenth century cupboards. And it would take a long time to repeat the barest catalogue of the treasures of sculpture and woodwork and ironwork and glass in the eastern parts of Lincoln cathedral. I will merely mention one fact (or theory) which I do not think has been much noticed hitherto: it is that in the lancet windows of the great south transept there is thirteenth century glass of two different styles, and it seems reasonable to suppose that the more archaic panels in these windows were brought there from some of the chapels of St. Hugh's apse when this was destroyed to make way for the "Angel quire."

F 3

whole, the only serious defects being a slight tendency for the clerestory walls to buckle outwards.

It will be noticed that the two western bays are narrower than the others and that there is no flying buttress to the western pier of the nave, this being accounted for by the presence of a chapel on each side like those in St. Paul's Cathedral. The northern chapel is groined from a very lofty slender central pillar of marble; the corresponding southern chapel has a square domical vault. These chapels are prolonged westward outside the line of the western towers,

and when they were built considerable masses of masonry were added at the eastern angles of these towers. It almost looks as if anxiety was felt about these towers as early as the middle of the thirteenth century. And we read of earthquakes and other dreadful occurrences which may have caused disruption at this end of the cathedral—and we can see for ourselves strangely distorted arches, the remains of Bishop Alexander's work, on the sides of the towers flanking the nave. No sooner was the nave finished, perhaps before, the central tower collapsed in the second year of Bishop Grosseteste's episcopate. But Grosseteste was not a man to be easily discouraged and the tower was soon rebuilt, a light lantern with double walls and two stages of galleries carried on broad arches and on splendid clustered piers of marble which are still very sound and good, though the great arches have cracked a good deal owing to the later additions which were built above Grosseteste's lantern. The refacing of the west front was probably done when the nave was building, and was not, in my opinion, done for any structural reason, but simply with a view to decorative effect and to provide room for statuary like the fronts of Salisbury and Wells. The thirteenth century niches and arcades stand in the same plane as the Norman arches of Remigius's west front, and therefore cannot very well have been added in order to provide an abutment to the west towers as has been supposed. Recent investigations show that this thirteenth century facing is not bonded into the earlier masonry, and therefore its addition has weakened the towers rather than strengthened them.

To revert to the central tower it has been possible to examine the interior of the lantern in detail during the progress of the present works and to ascertain how the lantern has been strengthened in order to enable it to carry the vast belfry which was added in the fourteenth century about the time the "angel quire" was building.

The original lantern had four lancets on each face, grouped in pairs, and was two storeys high above the arches. The shafts were of marble and the ceiling was certainly of wood. In the fourteenth century the belfry stage was added, a proceeding which must have doubled the weight of the tower, and the lantern stage was vaulted in red brick with stone ribs. This vault has,

of course, springers at each corner of the lantern, and in addition there are intermediate springers above the points of the large tower arches. To provide abutment for these intermediate springers an ingenious device was made use of. Each of the thirteenth century lancets was divided in two with a stone fourteenth century column, and from these fourteenth century columns, which were bonded into the outer walls, arches were turned in the thickness of the passage-way round the lantern. These arches carry the abutments of the intermediate springers of the vault. The arrangement distributes the extra load in a very scientific manner and avoids increasing the stresses on the slender thirteenth century arcades and shafts as far as is possible; though, of course, the risk of building so vast a belfry on so slight a substructure must have been very great.

The belfry of the central tower is built as lightly as possible and, on the whole, it has stood very well, although there are some bad cracks on the north and east sides and most of the bond stones provided to tie the two thicknesses of wall together have been broken through.

Extensive works of strengthening are in hand in the central tower, and the four great arches and the adjoining walls of the transepts have been consolidated, as has the masonry of the thirteenth century lantern.

Passing over other important building work done during the fourteenth century, such as the completion of the "angel quire," the building of the cloisters, and the rebuilding of the south transept front, we find that the cathedral authorities must have become dissatisfied with the appearance of the west front; this will be easily understood if we visualise the present front without the top 70 ft. of its towers. Remigius's front, with its projecting transepts, must have been bold and striking, but when these projections had been masked by the screenwork added in the thirteenth century, the whole thing must have looked comparatively flat and uninteresting, and the tops of the two stumpy Norman towers peeping over the thirteenth century screen wall must have made the effect worse than it would have been without any towers at all. So it was decided to raise the towers 70 ft. and to add spires to match the spire which then existed on top of the present central tower.

Considering the risks that had already been

taken in building the central belfry and its spire on the top of a thin shell of masonry like Grosseteste's lantern, it is not to be wondered at that the raising of the western towers was undertaken quite cheerfully, since the Norman substructures, though they had evidently settled a good deal, and though they must have even then shown signs of weakness, were certainly bulky, and may have been assumed at the end of the fourteenth century to have been sound.

tower to a less extent to the north. So above the vault of the nave a very flat arch was built, comparatively roughly, in order to act as a tell-tale and to give warning if the divergence of the towers should increase during the process of adding the belfries.

Although the recent strengthening of the north tower and the proposed consolidation of the south tower have become unquestionably necessary for the preservation of this part of the cathedral, it



THE NAVE, LOOKING EAST

Probably it was argued that the cracks and settlements (for the towers both must have leaned outwards before the present belfries were added) had occurred shortly after the completion of the older work, or were perhaps the result of the traditional earthquake and that the old towers had finally taken their bearing, and that therefore it was quite safe to carry them up.

Still, somebody seems to have had doubts about this, and the chief cause for hesitation must have been the fact that the south tower leant very considerably to the south and the north

should be remembered that the west towers remained standing for 500 years after they had been raised to their present height; the tell-tale arch, though somewhat distorted and showing signs of movement having occurred since it was built, has not fallen, and although various attempts to strengthen the substructure have been made during the last 200 years it has never been possible until now to get at the real source of the trouble owing to the lack of means. The fact that in spite of all this the towers have stood as they have done makes us marvel at the skill of the fourteenth cen-

tury builders while we are staggered at their boldness.

The belfry stages of the western towers have two large two-light openings on each face; Bishop Alexander's work on which they stand has three openings on each face, so the heavy piers between the belfry windows stand on the crowns of Bishop Alexander's arches. The masonry of the belfries is naturally much better than that of the Norman work below and is well bonded with not very much rubble filling, though the work is not built throughout with block stone. The external surface is much weathered and a great deal of this has, unfortunately, to be renewed in the north tower. The exterior of the south tower was reinstated about 40 years ago. This reinstatement, though regrettable, is inevitable. It is a question of disintegration and the consequent risk of accidents due to falling pieces of stone and is quite a different matter from that of the stability of the towers.

At or about the same time as that of the completion of the belfries the ground stages of the towers were remodelled internally, the Norman arches leading into the nave were built up and those leading eastwards into the aisles were remodelled. The walls were veneered with perpendicular tracery, the present west windows were inserted, and the tower spaces ceiled with exceedingly flat lierne vaults. A close examination of the vault in the north tower, which is now centred preparatory to its repair, shows that there has been a change of design here, the springers being prepared for a much steeper vault and the whole work being clumsily put together as if the stones had all been prepared for fixing before the change of design was decided upon.

As has already been observed, all the three towers of the cathedral once had tall leaded spires. The central one is said to have fallen on the day when the use of the English Prayer Book was first adopted at Lincoln, but the western spires were preserved until the end of the eighteenth century, when they were taken down as being dangerous, a proceeding which gave rise to much resentment. At this time James Essex was architect to the Dean and Chapter and was busy with repair works to all three towers. But before his time the condition of the western towers must have caused alarm, for the Norman arches on the ground floor were built up with solid masonry pierced only with comparatively small doorways. This is said to have been

done by Gibbs, who may have become connected with the cathedral during the building of the library which is attributed to Sir Christopher Wren.

In or about the year 1800 Essex added two buttresses on the inner eastern angles of the west towers, the only angles not then buttressed in some fashion or other, and he connected these new buttresses with an arch crossing the nave at the level of the triforium.

Essex was an architect of ability and taste and appreciated Gothic architecture better than most of his contemporaries. Here at Lincoln he added the parapet of the central tower, a most admirable piece of design though unfortunately built in too fragile a manner considering its exposed position. Essex is also responsible for the reredos of the high altar, a piece of work which no one would dream of reproducing, but which nevertheless has so much artistic merit and is of so great historical interest as an early monument of church revival that it merits careful preservation, notwithstanding the fact that fashions change in these matters.

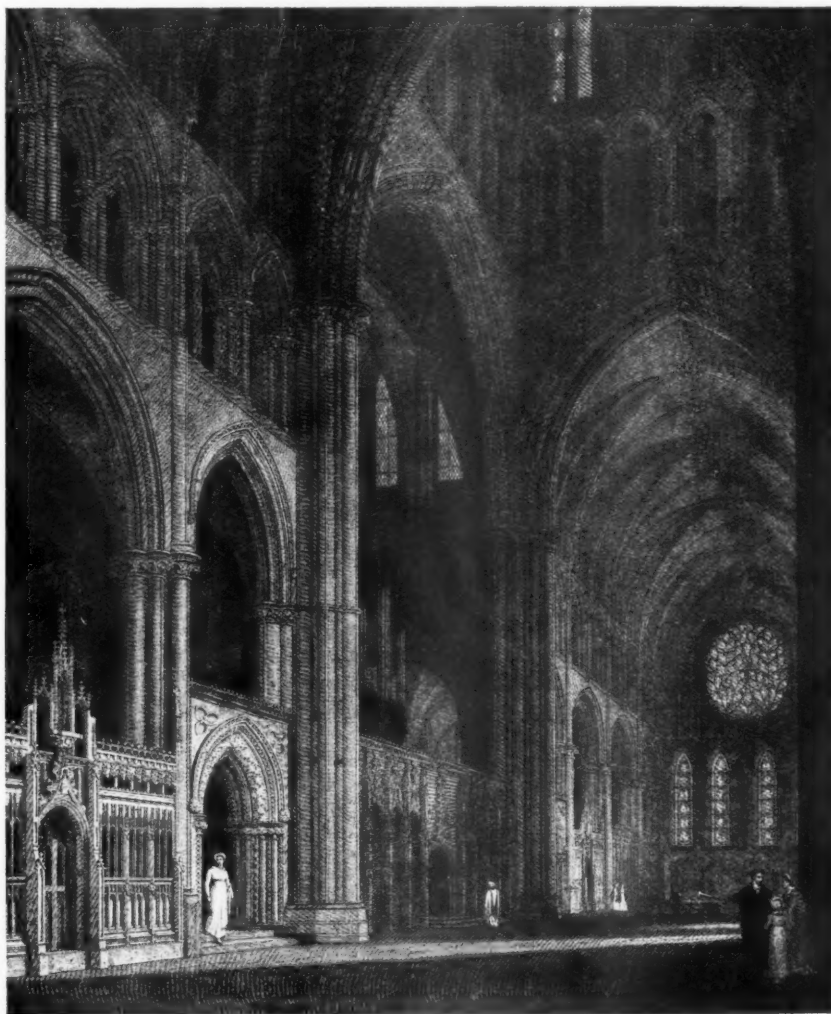
Essex, I believe, also designed the bishop's throne, which fits in admirably with the fourteenth century stalls. And he built an apsidal chapel off the north-east transept on the site of an older rectangular chapel in a manner which it is difficult to distinguish from the style of the adjacent chapels of St. Hugh's period.

Repairs were going on under Essex in the central tower also. A large crack over one of the great arches had a bond stone let in with the date cut on it, probably intended to act as a tell-tale. The existence of this had been forgotten, but it was rediscovered during the present works. The movement since Essex's time had not been very great in this part of the fabric.

Buckler was one of the architects in charge of the cathedral during the nineteenth century. He was one of the older school of Gothic revivalists and did excellent work in his time, especially in and near Oxford; Lincoln cathedral was fortunate in being under the care of so modest an artist at a period when Deans and Chapters and eminent architects were egging each other on to destroy Rood-lofts and erect Venetian mosaic reredoses. During the middle of the nineteenth century not very much was done to the cathedral beyond the ordinary repair of stonework and lead and the building of a very excellent timber roof over the south transept. Buckler did some restoration of the Nor-

man west doors and he or his predecessor was also responsible for inserting iron ties across the west towers and adding external iron bands—the best

of Dean Gregory at St. Paul's, an extensive scheme of restoration was set on foot under the late J. L. Pearson.



THE TRANSEPT
Showing the Lantern in Central Tower and "Bishop's Eye"

thing that could be done at the time short of a complete reconstruction.

About forty years ago, during the deanery of Dr. Butler, a distinguished churchman of the school

The angel quire, the north transept, and the chapter house and cloisters were all more or less thoroughly restored under this scheme, and although some of the details may be open to

criticism, the ultimate result has been undoubtedly beneficial. The renewal of chipped and broken mouldings and ashlar may have been too drastic, and the use of Weldon stone in replacing these was certainly a mistake, not that the Weldon stone itself has decayed, but that, owing to the porous nature of the new stones, the old stones immediately underneath them have suffered most seriously in many parts of the work.

About the same time as the restoration of the east end, Mr. Pearson took the west front and towers in hand. He found both towers in bad condition, but considered the south tower to be the worst of the two, certainly it was the most out of the upright. This tower he set to work to restore and to make suitable for the cathedral bells. He built up several of the open arcadings with sound ashlar, put in what bonders he could, thoroughly restored the external masonry, and designed a tall timber bell cage like those described by Viollet le Duc to minimise the effect of the bells on the tower walls. (This timber belfry was afterwards superseded by a steel frame when the bells were rehung by Taylor of Loughbrough.) In short, he did the work as thoroughly and well as it could be done forty years ago; but he could not tackle the inherent weakness of the Norman sub-structure, a thin ashlar facing filled with concrete which had lost its cohesion, since he had no appliances wherewith to remedy such a state of things. There is a story among the cathedral workmen that when the shores were removed after Pearson's restoration, a loud crack was heard and the western screen wall moved an inch or more forward and then came to rest, a hair-raising experience for those present on the occasion.

Nothing was then done to the north tower beyond building up an opening or two with ashlar, but in 1896 some fresh iron ties were put in.

After the death of Mr. Pearson the late Mr. Hodgson Fowler became architect to the Dean and Chapter, and between the death of Dean Butler and the appointment of the present Dean, Dr. Fry, very little was done to the cathedral beyond current repairs, though a new library was built and electric light was installed in the church. Mr. Hodgson Fowler died shortly after the appointment of Dr. Fry as Dean, and my personal connection with the cathedral dates from that time.

Some repairs were then in progress to the great eastern arch of the crossing, but it was evident

that the condition of the north-west tower was critical, though we had to wait a good many years before it was possible to take it in hand.

Sir Francis Fox will tell you about the repair methods which have been adopted. Grouting the Norman walls under pressure was, of course, an obvious method of procedure; but I believe I am right in saying that Lincoln is the first instance of the systematic employment of metal reinforcement in combination with grouting, and also that the use of mechanical drilling and the adoption of pneumatic jackhammers for this purpose were novelties at the time they were introduced at Lincoln.

The reason for employing metal reinforcement is fairly obvious. When a rubble-filled wall fails owing to crushing, it is bound to burst. Reinforcement tends to prevent such a wall from bursting, therefore it tends to prevent it from crushing.

As Sir Francis Fox will tell you, the north-west tower has been strengthened not only by grouting the existing masonry, but by adding reinforced concrete girders in the various passage floors, and in some places vertical concrete posts, all carefully connected up to the reinforced hearting of the walls.

As regards the reinforcement, delta metal was chosen, as more reliable than steel, from the point of view of the risk of corrosion. But delta metal is of a rather greasy nature, and not likely to adhere to the concrete as steel will do, so at Lincoln the delta bars are in all cases twisted and hooked.

As for the necessity of mechanical drilling, it need only be remarked that without this it would have been impossible to have reached the heart of the walls without bringing the whole super-structure down in an avalanche.

The work that has been begun at Lincoln has only been made possible by a fortunate combination of circumstances. The first of these is the unselfish and marvellous energy of the Dean and his success in enlisting the support of the county of Lincolnshire and of friends and kinsmen in America and elsewhere.

But the provision of funds is not all that can be done, and I pay my tribute here to the moral support the Dean and Chapter have given throughout a difficult time to those actually engaged upon the work. Next we have had the ungrudging assist-

ance of Sir Francis Fox, with his unrivalled experience in structural work of all kinds, the experience of a long lifetime, combined with an almost youthful readiness to adapt old methods to new problems, and with physical activity equal to his freshness of outlook. Then again, it seems almost providential that at this particular time the resident supervisor of the works, my good friend Mr. Robert Godfrey, should happen to have had a natural talent in mechanical engineering and practical workshop experience to boot. I venture to say that without the exceptional experience of such matters which Mr. Godfrey possesses, the present works would have cost double what they have done. Upon Mr. Godfrey's devotion

to the interests of the cathedral and upon his personal courage in performing his duties in times of ill-health, I will not presume to enlarge. But I can testify here to the efficiency and good will of all the cathedral workmen as well as to the other personal factors which have made this important undertaking possible.

Sir Francis Fox will now give an account of the work from the point of view of one who has had intimate experience of constructional work of such variety and magnitude that the repair of a cathedral tower might well seem a small affair to him, but who has nevertheless given his best of thought and of personal exertion in the interests of Lincoln Cathedral.

Part II—The Injuries and Accidents, and Methods of Repairs

BY SIR FRANCIS FOX, MEMBER OF THE INSTITUTION OF CIVIL ENGINEERS [*Hon. Associate*]

WITH PHOTOGRAPHS BY MR. S. SMITH, STEEP HILL, LINCOLN

IT was in July, 1921, that I was invited by the Very Rev. the Dean of Lincoln, Dr. Fry, to visit his cathedral, and he said that Sir Charles A. Nicholson, the diocesan architect, would be glad if I would co-operate with him in the serious endeavour to save that splendid and ancient fabric.

I need not say the great pleasure it afforded me to do so; and the willingness and kindness evinced by Sir Charles were most encouraging.

The first step to be taken was to look up all the history of the cathedral, in order that we might be guided aright as to the very serious injuries to the central tower and the two western towers.

I did not think we were likely to find the building had subsided as at Winchester, for the fabric stands on the summit of the high ridge, and was not likely to be affected by water in the foundations—practically all the plinths are level; but we felt that with the precarious conditions which existed in these two towers, it was inadvisable to make any examination of the foundations until a later date. This, however, has since been done, and it was found that the cathedral is standing upon a fine solid bed of oolitic rock.

At my first visit I was introduced to the Clerk of Works, Mr. Robert S. Godfrey, and I felt it was very important to both of us; but I was sure that the choice of both the Dean and Sir Charles Nicholson could not be anything but wise. It only required five minutes' interview with Mr. Godfrey to show that he was a man of great experience and ability in all directions—and now, after five years' co-operation, the choice has been more than justified.

It will be helpful to give here a list of the various

disasters which have occurred to the cathedral. The following are the major events, but doubtless many smaller ones have taken place during the lives of each succeeding generation.

In the year 1124 the cathedral was gravely injured by fire.

In 1185 it was razed to the ground by the great earthquake, with the exception of the two western towers and the East bay of the nave.

1244-5. The great central tower fell down.

In 1547 the timber spire of the central tower, which was 300 feet above the masonry structure, was blown down during a severe gale.

When the great earthquake took place, recorded by the historian Roger de Hovedon, in 1185, the entire Norman cathedral was brought to the ground with the exception of the two western towers, the height of which is 212 feet.

On the appointment, in 1186 A.D., of the new bishop from Witham Priory, Somerset, St. Hugh of the Grande Chartreuse, near Grenoble in Burgundy, he announced his intention of rebuilding the entire cathedral, but desired that the western towers should, if possible, be retained; and, with the intention of providing a buttress to hold them up, his successors, Hugh de Wells and Grosseteste, reconstructed the fine western front, which is approximately 200 feet in width by 100 feet in height.

Much to our surprise, this masonry front was found, on investigation, not to be properly bonded in with the towers; and there were serious cracks existing for the whole distance of 200 feet, and for the height of 100 feet. The result was that the entire front was

showing signs of falling in a westerly direction on to the green sward of grass—like the cover of a book.

Notwithstanding all precaution, the towers continued to settle, and the cracks which were in the old work, to grow larger and spread in different directions.

These fissures in the masonry seemed formidable enough to justify the anxiety of the Chapter of a later period; but even 200 years ago they were so much increased that the towers themselves were thought to be in danger of falling. As a preventative, the heavy structure, or the building up of the two main arches under each of these two towers was advised and carried out under the direction of Mr. Gibbs, the consulting architect of that period, *viz.*, 1726.

Mr. Gibbs also advised the taking down of the lead-covered spires of the two towers; but, as the citizens were antagonistic to such an extent that it culminated in a riot, it was decided to leave them until a more convenient time. The demolition of the spires took place in 1808, as far as one can trace, without any opposition.

Even with this lessened weight, the movement still carried on; for in 1820 heavy iron cramps were applied, by the advice of an eminent architect, to prevent further mischief by the spread of the fissures in the towers. These bars are an inch thick and four inches broad, the inside ones being carried through the wall at both ends, and through a corresponding bar outside, and screwed to it by a powerful nut. Five of these hoops, both inside and outside, are attached at proper distances, between the roof of the church and the top of the towers. According to records, about six tons of iron are thus used on each of the west towers.

We intend to take off these iron bands as the repair work proceeds. Two of those at the highest point have already been removed, and on one, the smith's name and the date is deeply stamped or cut in. The date coincides with that just given, 1820. Several of these iron bands are broken in two; in some cases there is a distance of two inches between the broken ends, which clearly shows spreading of masonry. In other cases, the bolt that carries through the wall has broken immediately behind the nut; some of the nuts have fallen to the roof below; others that are so rusted in, have stayed in their position, thus giving a false impression of security. In addition to these iron bands, some hundreds of iron wedges have been used to level up the courses of the masonry that had dropped, owing to the spreading of the tower walls. The destruction produced by wrought iron to masonry is almost incalculable, as it is laminated, and when the corrosion takes place these laminations gradually open, and by this slow expansion the whole mass of masonry is either lifted or broken off. In some cases, hundreds of tons of masonry are being lifted or forced

from their original position. There are cracks to-day from 1 inch to 6 inches wide, running practically the full width from the south-west corner of the west front to the south-west angle of the north-west tower. These cracks, prior to the present repairs, carried right across the north-west tower to the extreme north end of the west front. One crack at 90 feet up was 12 inches wide. This is now made good.

In 1896, the cracks in the walls of the north-west tower continued to open and spread in different directions, and it was urgently necessary that something should be done, and done quickly, to prevent the collapse of the tower. The authorities at that time adopted the method of fixing strong iron bars through the walls at various levels, and on the most vital parts running from east to west and north to south. This was a serious undertaking, as to cut holes through the masonry, in some cases 14 and 16 feet thick, which is badly dislocated, and without slip, was no mean achievement. Our present master mason, Mr. H. J. Davis, was on this work, and time after time when they had nearly cut through the walls, the loose rubble in the interior would fall, and they had to begin all over again.

There is no doubt the iron bars steadied the movement for a time; but, as the whole of the masonry was so completely dislocated, the movement continued to the last.

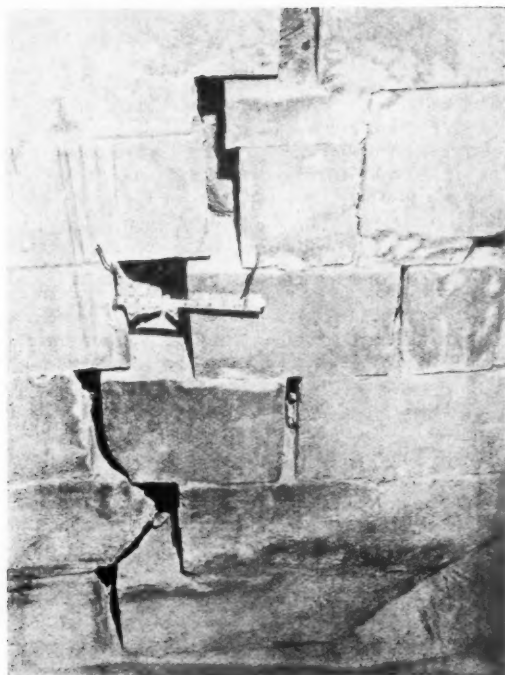
In 1921 the arches in the bellchamber opened to such an extent that the archstones had to be strutted to prevent their falling out. Also the ribs of the vaulting of the north-west vestibule had dropped, so that instead of their being concave they were convex and at the point of falling to the ground.

The south-west tower is still urgently requiring attention, as the tell-tales, which are constantly being replaced, break within a few weeks after their fixing, which is a sure sign of continued movement.

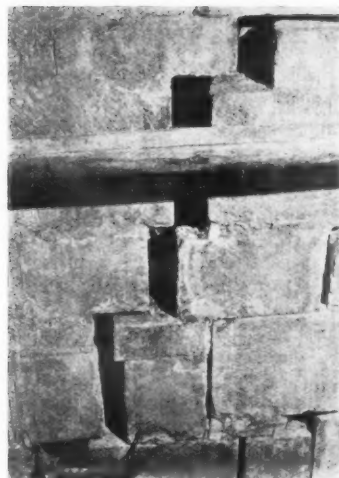
The authorities have from time to time been engaged on the strengthening of the central tower and transepts.

Behind the arcading in the lantern very strong relieving arches have been built in on each side, and additional columns inserted. This was so skilfully carried out that, unless one is familiar with it, it seems to be the original design.

The central tower, the crowning glory of the cathedral, is most wonderfully light in construction. Unfortunately, it has proved to be too light to be of sufficient strength to withstand the ravages of time. The tower has what might be termed a double wall, with passages running round each of the four sides. At certain heights these two walls are coupled together with strong bonding stones, and for a few feet upwards the walls are united with masonry; then again



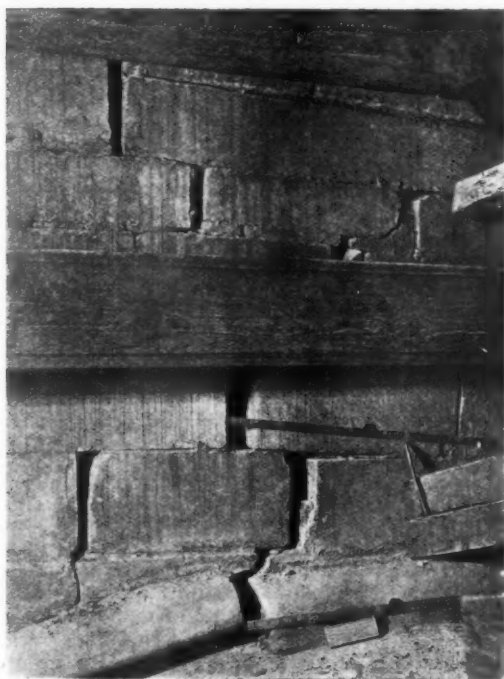
(1) North Wall of Central Tower from above the North-west Transept Vaulting. North-west Spandril



(2) North Wall of Central Tower from immediately above the North-west Transept Vaulting. North-west Spandril 80 feet up



(3) North Wall of Central Tower from immediately above the North-west Transept Vaulting. Position to the North-East Angle 80 feet up. Fissure 6 inches wide



(4) Arch Broken immediately above the Lantern of Central Tower

come the two independent walls, and so on to the top of the tower.

Owing to the continued spreading of the cracks in the walls, to-day there is not to be found a single bonding stone intact. Each one—and they are many in number—shows fractures from $\frac{1}{4}$ in. to 2 in. wide.

The tower walls are split in almost every possible direction, vertical, horizontal and longitudinal with the wall faces.

In 1924 the two sub-arches, which are seen immediately above the vaulting of the lantern, had collapsed to such an extent, owing to the four main lower arches spreading, that the weight of the masonry above was actually bearing on the vaulting of the lantern, and as this is only a very light construction, intended merely to carry its own weight, it was showing serious fractures.

All of this dislocation has now been made good and completed to the clock chamber floor, 125 feet above ground level.

It is quite possible that the disintegration in the central tower was caused in the first place by the fall of the spire, A.D. 1547, as described later. This also severely racked the north and south transepts, causing the walls to buckle outwards, which in turn has allowed the vaulting to flatten slightly, splitting and flaking the stones of the arch ribs.

Doubtless during each century and each generation efforts were made to effect necessary repairs, but these were limited to the face stones, both inside and outside the towers; and, although the work was certainly good, the masonry within the walls could not be reached by the then known methods.

The first matter of interest which we encountered in the north-west tower was the dungeon, which in early and mediæval days was used for the confinement of prisoners who were to be executed under powers held by the ecclesiastical authorities. This chamber, which is on a level with the floor of the cathedral, is 20 feet in length, 6 feet in width, and has a height of 20 feet. It had no door nor window, not even a ventilator. The unhappy prisoner was lowered by a rope through a trapdoor in the stone arch above and taken out in the same manner to his death.

We have been able to repair the cracks and defective masonry, thus preserving the dungeon for the inspection and interest of all future generations.

About 45 feet above the nave floor we found what evidently was a doorway built up with masonry which, on being examined and removed, disclosed a circular stone staircase communicating with the ground level, with the original stone newel in position. No record of the existence of this staircase has been found, but it was filled with débris from the earthquake for its entire height. This has been grouted into a solid mass,

and serves as a most effective buttress in what was otherwise a weak place.

Another unpleasant discovery made during the work on the north-west tower was the damage done by the "death-tick" beetle, or *Xestobium tessellatum*, the great enemy of most ancient timber roofs, which has since been discovered in many parts of the cathedral, and to which the late Professor Lefroy devoted so much attention. The floors have been reconstructed in ferro-concrete, which no beetle yet discovered can touch.

It will be remembered that I read a paper before the Royal Institute of British Architects on 17 February 1908, on the system of grouting by pressure invented by the late Mr. James Greathead, which I applied throughout the repairs of Winchester Cathedral with a result so absolutely successful, not only there but in scores of other buildings, that I strongly advised the Dean of Lincoln to allow the method to be adopted at his cathedral. As a preliminary step, it would be necessary to obtain the approval of Sir Charles A. Nicholson and of Mr. Godfrey, to both of whom the treatment was novel. Sir Charles stated, in a letter of 6 December 1921 to me, in the kindest and most generous language, "I was grateful to make use of your experience, which I should say is unique in matters such as that we have in hand."

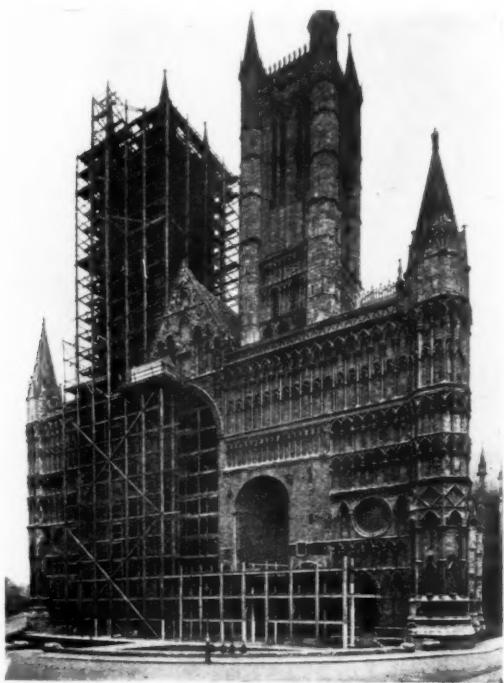
Mr. Godfrey's wide knowledge of mechanical engineering enabled him to lay out a perfect air-compressing plant for machines in any part of the cathedral, and for delivering water, also by compressed air, to any height of the building which is above the limit of the city water company. He also introduced the jack hammers and chisels, and the employment of delta metal as tie rods, thus avoiding the objectionable results of using iron and steel which one sees throughout Lincoln and St. Paul's Cathedrals. The nuisance of covering the whole fabric with dust is also prevented.

As a result of all these improvements, which, based on the grouting system, have been in course of execution to the present time, we hope that by 1927 all the major repairs will have been completed, unless we find still further trouble as we proceed.

The second great cause of damage was the collapse, in the year A.D. 1547, of the high timber steeple or spire which had been erected on the central tower, and attained a total height of 500 feet above the floor of the nave. Providentially it fell, more or less vertically, upon itself, and did not cause much damage to the roofs of nave, choir, and transepts, but it explains the great cracks which we found in the four walls of the tower and in the masonry floor of the bell chamber, which will be further described with the aid of photographs later on.

We now return to the repairs on the north-west

tower. This is approaching completion, thanks in great measure to the fine timber scaffold, 212 ft. in height, 35 ft. wide and 36 ft. in length, which is constructed of 9-in. by 3-in. planks, all standardised, before leaving the ground—each upright requiring three planks in the bottom portion 7 in. by 2 in. and two in the upper. It is the finest example of such a scaffolding in existence and is a monument to the skill of those who designed and constructed it. In no place is



FURTHER ADDITION TO WEST FRONT SCAFFOLDING
JUNE 1925

it more than $\frac{1}{16}$ of an inch out of truth. By the help of this scaffold the external masonry of the tower has been examined. It was found to be so weathered and broken that almost the whole 9 ft. of the top of it has been refaced. It also enables the men to pay attention to any cement grout escaping on the outside of the walls, and immediately to apply wet clay on any leak and thus avoid staining the masonry face.

Within a comparatively early date, this scaffold will be taken down and re-erected on the four sides of the south-west tower—for although this was repaired 40 years ago, nothing but masonry facework could be dealt with, the interior rubble being cracked and loose, but

we hope and think that these repairs will not prove nearly so serious as in the case of the north-west tower.

Sounding the Walls.—This is effected by gentle tapping with a one-pound hammer—throughout the entire fabric—and, wherever it indicates cavities, the necessary application of the nozzle and the forcing in of cement under pressure (delta metal ties having been previously placed in position) immediately render the walls sound and solid.

In many places the masonry blocks were neither bonded nor tied in, and wherever visible cracks exist they are carefully investigated, for although perhaps only an inch in width is externally visible, they may prove to be anything up to 10 or 12 inches in the interior.

Owing to the transept walls buckling, the vaulting had flattened to such an extent as to show cavities from 4 to 5 inches in width between the vaulting and the main walls, up and down each cell to the full length of the transept. These cavities were not previously located, as a great many others were, owing to their being full of accumulated dust and debris.

Thanks to the unceasing energy and courage of our good Dean, who made one journey to Canada and two to the United States—the cost of the repairs of the central tower and adjacent transepts has been most largely undertaken by our transatlantic cousins—in memory of their ancestors who sailed in the “Mayflower” in A.D. 1621 from Boston in Lincolnshire and founded Boston in Massachusetts—afterwards spreading over the entire continent.

The weight of the vaulting in each of the two transepts is over 300 tons; and the approximate weight of the central tower is 13,237 tons. The total area of the four main piers at the base on floor level is 361 square ft. Assuming these bases are carrying the total superimposed weight, it works out at $36\frac{2}{3}$ tons per square foot.

The approximate weight of the north-west tower is 8,500 tons, equal to 19 tons per square foot on the foundations.

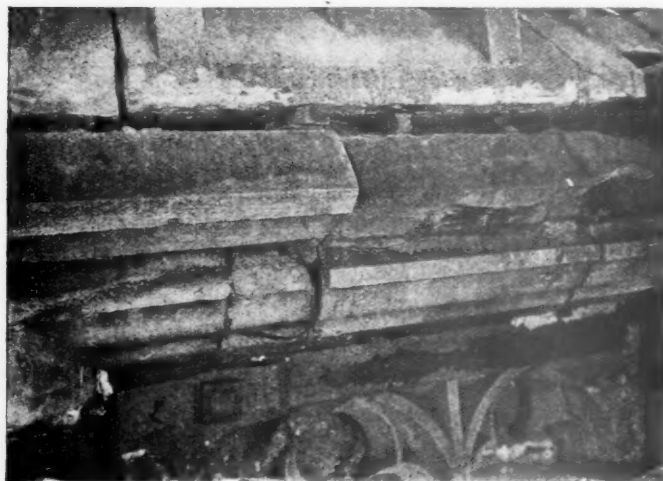
We will now consider the facts which necessitated the present repairs. In July 1921, Mr. Godfrey was carefully examining the north-west tower, and found considerable movement had taken place since the previous examination. Immediately tell-tales were fixed over every crack that could be reached with ladders. After this was completed, which extended over several months, they were all examined and checked, and those broken replaced. These were eventually again examined, and finally we found out where the greatest movement was taking place. This was at some 90 ft. above ground level. The tell-tales fixed at this height one day were found to be broken in two the next. On one occasion, October 29th, after a gale of wind, we found tell-tales had opened $\frac{1}{16}$ of an inch, of which a report

was immediately sent in to the Dean and Chapter. After a thorough examination they and we came to the conclusion that it was only by grouting under pressure that the cathedral could be saved.

Steps were at once taken to get the necessary plant to commence operations.

The grouting machine was, as already stated, invented by Mr. James Greathead about 1888 for use in construction of deep tunnels and the electric tube railways of London, and has been used with great success for the securing of notable road and railway bridges, Winchester Cathedral, and many other historic buildings right down to the present time.

Owing to the extensive amount of grouting that



NORTH-WEST TOWER. NORTH WALL NEAR NORTH-WEST ANGLE
SHOWING CORNICE AND SILL BELOW PARAPET—TIED
TOGETHER WITH IRON BARS

would be required at Lincoln, and the thickness of the walls that we had to penetrate, in some cases 20 ft. thick, it was decided to purchase a motor driven air compressor. This was delivered and grouting commenced March 9th, 1922. We very soon found out that, owing to the looseness of the rubble core, some other method less costly and also less dangerous, other than the ordinary hammer and chisel must be applied to enable us to get the grout right into the hearting of the walls.

To this end jackhammers, driven by compressed air were purchased. These tools have proved to be most effective from every point of view. It is nothing unusual for two men to drill a hole in the walls to a depth of 12 ft. in one hour, in what would otherwise require the same number of men five to six days with the ordinary hammer and chisel method. This was not

the only point we had to consider. The condition of the masonry was almost at the point of collapse, and would not stand the heavy blows of the hammer; whereas with the jackhammer, although it makes a terrific noise in working, it gives a percussion blow, with very little jar to the building. By these means we have drilled into the masonry of the north-west tower up to October 28th 1925, inclusive, 11,774 holes, approximately $5\frac{3}{4}$ miles in length, and the number of holes in the centre



NORTH-WEST TOWER. NORTH WALL (CENTRE) SHOWING
CORNICE BELOW PARAPET

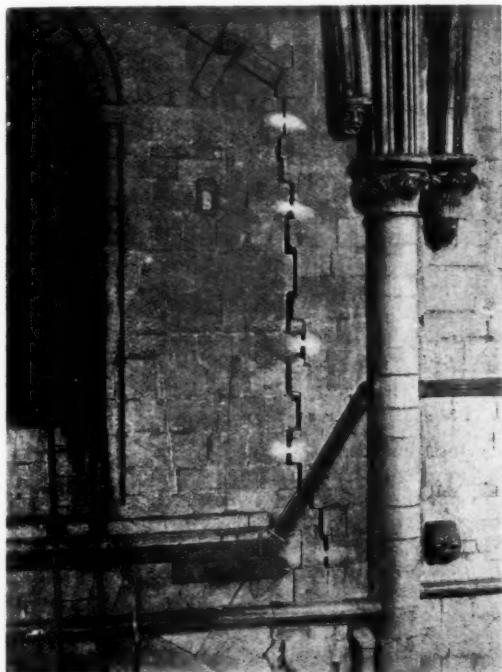
tower and transept 10,623, approximately $3\frac{1}{2}$ miles, making a total of $9\frac{1}{4}$ miles.

An accurately written record is issued week by week, and, in many instances, drawings are made showing the exact position where every hole has been drilled, the line it takes, and where every gallon of grout has been forced in.

By this method of grouting we are able to repair the most ancient and beautiful buildings, without in the least degree defacing their antiquity. At the same time we practically rebuild them, making them many times stronger than they were when first erected, without so much as moving a stone.

It may be of interest to know that the improved method of grouting, and the drilling of the walls by the jackhammers, which originated at Lincoln, have been adopted and are being carried out at Durham Castle, St. Paul's Cathedral and elsewhere.

The method has aroused a world-wide interest. Notable engineers and architects from all parts of the globe have inspected it, and have written expressing their full approval of what we are doing.



CRACK IN SOUTH FACE OF NORTH-WEST TOWER,
45 FEET ABOVE FLOOR LEVEL

Before proceeding further, I would like to say a few words about grouting. As you know, there was a great deal of controversy for and against it while St. Paul's was appealing for funds in the early part of last year. There is bad as well as good grouting. Unless this method is carried out in a right and scientific manner, the state of the walls sooner or later will be worse than before. The proper order is first to blow out all dust and dirt that is in the loose core, then thoroughly to wash out with water under pressure, continuing to blow water in until it runs out of the surrounding places quite clean. While the core is still damp, and in a receptive condition, the cement grout must be blown

in also under pressure. This is varied according to requirements, 40 lb. to the square inch being the average employed.

If the core be not thoroughly cleaned, you simply fill the void; and the cement will not adhere, consequently you have added weight without adding strength to your building.

In addition to the grouting up of the cracks, we are reinforcing the masonry with delta bronze cramps.



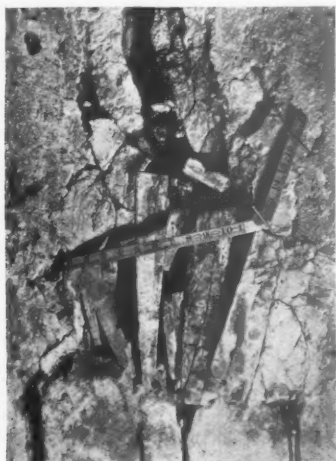
NORTH SIDE OF NORTH-WEST TOWER 90 FEET UP, SHOWING
REINFORCEMENT FOR CONCRETE BEAM. LOOKING EASTWARD

These vary from 9 in. to 14 ft. in length, and $\frac{1}{4}$ to 1 in. square, and have a tensile breaking strength of 30 tons per square inch. Up to October 28th inclusive we have inserted 5,406 cramps in the north-west tower, and 2,961 in the central tower and transepts, a total weight of 13 tons, 4 cwts.

The zig-zag lines in the masonry show that the north-west tower was split right through from top to bottom. These cracks were equally as bad on each of the other three sides. In fact, the tower was split from floor to roof into a number of separate sections, trusting entirely for support to broken iron bands and bolts, and fractured wood tie beams.

To prevent any possibility of further spreading of the tower walls, we have (in the passages which are in the thickness of the walls) constructed strong reinforced concrete beams. Six have been provided at various heights, the top one of these forming the roof-plate. The four octagonal turrets are anchored to each of these beams, well braced at the angles. It is estimated that each of these beams will stand a strain of not less than 800 tons.

It is intended to carry out this same method of bonding the four walls together in the central tower. One beam is completed in the lantern and the reinforcement is in position ready for the concrete in the clock chamber, 125 ft. above floor level. The



SOFFIT OF ARCH CRACK FILLED WITH WOOD WEDGES
Ringing Chamber, North-west Tower, 110 feet up

photograph on page 175 shows the metal reinforcement before the cement is put in, and it will be observed that at each corner the metal is also placed at an angle of 45° , thus forming a strong tie.

A similar beam has also been constructed on the clerestory passage floors, in both north- and south-west transepts.

At different periods, some of the cracks which were seen by the public and of easy access, have been filled in with pieces of stone and pointed up with mortar. In two particular instances, the soffit of the two arches that had collapsed at some time, some 100 ft. above floor level, had been filled in with blocks of wood, and actually tightened with wood wedges, then plastered over with mortar, and lined out to imitate masonry.

Up to 28 October 1925, inclusive, we have forced into the walls and surroundings of the north-west

tower 22,944 gallons of grout, equal to 3,671 cubic ft. of space, and weighing approximately 104 tons, and into the transepts and the central tower, 10,372 gallons of grout equal to 1,659 cubic ft. of space, and weight 47 tons. What with the grout, the constructing of the reinforced beams, and rebuilding of the masonry in different parts, and reinforced concrete floors, we have used a total of 446 tons of cement, and 471 tons 19 cwt. of sand. To September 30, 1925, inclusive, 2,177 new stones, equal to approximately 1,766 cubic ft. of space, have been used.

This does not mean that we have increased the total weight of the building, far from it. Against this we have to calculate the hundreds of tons of *debris*, old timbers and ironwork which we have removed.

Even at the risk of recapitulation, I think it will be helpful to give the proper sequence of operations in repairs of this character which is as follows:—

No. 1. To shore and timber up the walls, and to centre the arches, in order to relieve them of as much weight as possible, and also to prevent any broken pieces of stone from falling.

No. 2. To wash out with water, and grout up, from the bottom, with cement, the masonry or brickwork, rendering the whole mass monolithic so that any operation may be as free from risk as possible.

No. 3. To replace broken masonry and to insert the necessary bond stone.

No. 4. When all this has been done, steps may be taken to strengthen the foundations.

It is evident that to alter this sequence in any way, is to court disaster: not a stone should be moved, nor cut open, even to remove old rusty ironwork, or rods until all grouting is done.

Before closing, I would like to say that owing to the modern application of compressed air, we are making considerable saving in the total cost, which in some cases amounts to only one-twentieth of that under the old methods of hand labour.

All old stonework is cut out by tools that are known in the foundries as Little David Chippers; these are also used for dealing with the old ironwork; the new stonework is being dressed by the same tool. The carving is executed by specially constructed compressed air chisels, capable of cutting to a minimum of 1,000 part of an inch. Air drills and saws are used for all carpentry work, a compressed air and water spray, invented by Mr. Godfrey, is employed for scouring the walls after grouting, and also for laying the dust created by the jackhammers, thus enabling the drillers to work in confined spaces without any ill-effects from the dust. Further, compressed air is also brought into requisition for forcing water from the Corporation supply to tanks on the top of the towers, some further 200 ft. up; thus doing away with the necessity of power driven pumps.

It must not be forgotten that the central Norman tower fell with the rest of the cathedral in A.D. 1195. It was re-erected by St. Hugh about A.D. 1200, but again fell—so that we now retain the third tower—and this has proved none too strong. We have driven small trial drill holes into the four great piers carrying the main tower and find they are solidly built; only one hole is done at a time, and is immediately grouted up solid with cement before a second hole is commenced.

nave pavement, have been carefully repaired and some 25 beautifully carved bosses have been uncovered and cleaned; where they show remains of gilding in the old days, this has been similarly restored, producing a most excellent appearance from below.

Photographs of four or five of these bosses will be appended, for it shows that although they are so far from the ground, they have been executed with amazing care and skill—in the spirit so well appreciated and described by Ruskin.



BOSS ON HORIZONTAL LINE
East side of Vaulting of Lantern under centre Tower
125 feet above floor of Nave

Date probably A.D. 1380

The spandril walls of the four great arches carrying the tower have proved to be very hollow in certain places, and these have now been solidified; but another very disagreeable discovery was that the transept walls were not bonded into the tower walls and it is to these we have given special attention for some considerable time. It is surprising the amount of grout that is taken in by the early English walls of the north-west transept.

The groined arches in the central tower which carry the belfry floor at a height of 125 ft. above the



BOSS IN VAULTING OF LANTERN OF CENTRE TOWER
125 feet above floor of Nave

I wish to call attention to the very excellent photographs taken by Mr. S. Smith, photographer, of Steep Hill, Lincoln, in all parts of the fabric—many by flash light and often in very dangerous positions. We owe him a great debt of gratitude, and sincere sympathy for the great loss of negatives by a fire which occurred on his premises.

I would like to add my appreciation of the kindness and help that I have received from the Dean and Chapter, Sir Charles Nicholson, members of the two committees, Mr. Godfrey, and for the loyal co-opera-

tion of all the workmen employed. It is only by this kindly feeling that this method of repairs has been brought to such a pitch of perfection. During the whole of the work we have been providentially and safely guarded from any serious accidents, for which we are deeply grateful.

We find that by care, and proper application of material and the excellent tools we use, we have, in places, been able in one hour to do work which 20 years ago occupied a week, and which then cost £1, but to-day one shilling. The result is that the total cost, so far, has been most moderate and bears no comparison with what the old system would have amounted.

The expense to date on the north-west tower

amounts to £29,319, and on the central tower and transepts to £11,317.

The whole of the work is carried out by direct labour by local workmen; the leading men having been specially trained for the specific branch upon which they are engaged.

In conclusion, I would add that it is no exaggeration to say that such speed, efficiency and economy have never been approached in any other cathedral work. By the methods described vibration is reduced to a minimum: we avoid the nuisance of covering the whole cathedral with dust, and nothing is done to mar in the smallest degree, the ancient character and dignity of this, the finest cathedral in the British Isles.

Discussion

(THE PRESIDENT, MR. E. GUY DAWBER, IN THE CHAIR.)

The Very Rev. The DEAN OF LINCOLN (Dr. FRY): I particularly want the audience to see one or two of the models that Mr. Godfrey has with him showing the result of grouting. I do not know, Mr. President, why I was selected to move this vote of thanks, because I really am a spectre at the feast. My business has always been, since 1922, to ask for help, and the consequence is that I find my best friends when I meet them turn and look into the shops, and if I venture on even a neutral discussion, like the stability of the franc, they change the conversation. But I should like to claim that one reason why we have been so successful is, that we are the happiest of Chapters. The four years that I have had since this serious work started have been to me, and, I believe, to all other members of the Chapter, a time of great personal growth of friendship and confidence; and so I am glad of the opportunity of saying that it is not through me, but through the security afforded by the unity of the Chapter, that we have been able to back up the work. I am glad to have in this room with me my Sub-Dean, to whose intimate skill in keeping accounts we owe the fact that we are ready for an audit to-morrow morning if it were forced upon us by public indignation. I pride myself a little bit on the fact that when the vacancy came, some years ago, in the clerkship of the works, I secured the appointment of Mr. Godfrey, because I ventured to see, behind his quite unassuming manner, all that we were likely to want in the way of skilled and loyal help, a loyal help which goes so far as preferring to overwork himself rather than to add to our expenses in having the work supervised. As to Sir Francis and Sir Charles, they have become much more than advisers, they have become close personal friends.

It is interesting, perhaps, just to mention that we did not think we should need so much, but we do think we shall need quite £75,000 to finish; it might be £76,000. I beg to move a sincere vote of thanks to Sir Charles and Sir Francis for their papers.

Mr. BASIL MOTT, C.B., in seconding the vote of thanks, said: It is a real pleasure to me to find that a very old

friend, Sir Francis Fox, is still willing, as he always was, to give his great engineering experience, his life's experience, to help anyone in a difficulty, and is still able to deal with national interests, and to help in any way in a national cause. I had the privilege of going, with Sir Francis Fox and others, to the Cathedral. I realised the magnitude of the work before them, and I also realised the wonderful manner in which they were dealing with a problem of great difficulty. I am extremely interested in grouting. I was fortunate enough to be resident engineer on the first system of underground railways when grouting was my chief concern, and I think I was the first person to use the grouting machine in the early stages.

May I say that the value of the association of Sir Charles Nicholson and Sir Francis Fox cannot be exaggerated. I think that if we could draw the bonds of the architectural and the engineering institutions closer together, it would be in the interests not only of the two institutions, but of the community as a whole. I happen to have the privilege, now, of being Chairman of a Committee which consists of architects and engineers and which is dealing with a problem of some national interest; and I should like to say that no one appreciates more the great value of the assistance that is being given on this Committee by the architects than do their fellow colleagues the engineers.

Mr. R. S. GODFREY (Clerk of the Works of the Cathedral): I have here two or three good samples of grouting and I have got samples of cement which were put into the trial jars early in 1922, and there is showing neither sign of expansion nor contraction, which is a great point to be considered in grouting. I have also got samples of the Delta metal, twisted in the same manner that we use in the grouting and the reinforcement. There are three sizes; we use them to 1 inch square. And we have the left-hand and the right-hand twist; the reason of that is to prevent any twisting. If there is spreading, there is no chance of it unscrewing; one turn grips against the other. Here is a piece of split stone, which I have had cut out to show the effectiveness of the grouting, sticking the two

pieces of stone together. And here is a very fine sample of cement grouting. I ask you particularly to notice that the cement is blown into almost the smallest interstices, and lumps of mortar are almost bound to the cement, encasing it like the shell of an egg. Here is another very good sample, showing pieces of stone grouted together; that has been in since September, 1922. The date is on the samples of each trial job.

Dr. D. H. S. CRANAGE [*Hon. Associate*]: I could not help feeling what a very unromantic age the early part of the twentieth century was, from the point of view of superstition. In the early part of the twelfth century, when the tower of Winchester Cathedral fell, it was because the body of Rufus was there. When the East end of Durham Cathedral was left they knew why they could not build it; it was because the holy St. Cuthbert, who objected to women, was buried close by. In the present day we have not that easy reason for deciding what is wrong with ancient buildings; we go to work in a very prosaic way. But we have all listened to the papers to-night and have felt that the romance is nowadays just as great, only of a different kind, and we must be filled with admiration not only for the patience and skill but for the tremendous interest and romance which this work brings home very strongly to our minds. We have to attend to the great laws of Nature, and if we go earnestly and patiently to work, we shall find out the secrets. I am sure we owe a very great debt of gratitude to the architect, the engineer and the workmen who have carried out this work, and I can only echo what has been said already, that we are proud to be here to-night and to hear of this wonderful advance which

will make secure for all time the Cathedral which, I believe, Ruskin called "The Queen of English Cathedrals."

Dr. J. W. MACKAIL: Lincoln Cathedral is, as has been well said, the Queen of English Cathedrals; it is the cathedral of which William Morris said that as soon as he got inside it he felt perfectly happy; there was no more to be said. That such treasures should be saved to us, as they will be saved, for many and many generations to come, by the skill and genius which are now to be applied to their preservation, is a thing for which we are all, I am sure, most thankful. May I just, in one word, congratulate my old friend the Dean on the brilliant success of his own efforts towards this great work, and wish that he and all others concerned may live to see it completed to their desire?

The PRESIDENT: I have now great pleasure in putting the vote of thanks to the two speakers for their papers to-night, Sir Charles Nicholson and Sir Francis Fox. It must be a matter of very great gratification to us as architects to feel that this national building is now in safe hands.

Carried by acclamation.

Sir CHARLES NICHOLSON, in reply: Thank you very much for your kind vote of thanks. Just now the wish was expressed that the Dean, Mr. Godfrey, Sir Francis Fox and myself, the Archdeacon and the others here might live to see the repairs to Lincoln Cathedral carried out. All I can say is that if we live to see them finished we shall be very old gentlemen indeed.

Sir FRANCIS FOX also replied.



Review of the Work submitted for the Prizes and Studentships, 1926

BY H. S. GOODHART-RENDEL [F.]

THE SOANE MEDALLION

THE design bearing the pseudonym "Dorvel" comes most near of any to the standard which the jury must exact if the medallion is to be awarded. That it does not reach this standard is due to the unsuitable character of its elevations. These are not unpleasing in themselves, and would serve well enough to veil the stack-room of a classical library. In a well-ordered city, however, the stack-room of a classical library would not be placed so as to front on to a large square, nor would the appearance of such a building be properly, or willingly, adopted for its head office by the directorate of an important bank.

The sense of *character* in architecture, like the sense of humour in life, is of great value to those who have it, and made little of by those who have it not. That it is not indispensable in the production of beautiful buildings may be seen in America, where the sense is at present little developed, and yet where many beautiful buildings are produced. That it is extremely valuable both to the architect and his public may be seen in France, where the national instinct for the appropriate gives charm and interest even to designs the least inspired and the most routine. Though loosely spoken of as a sense, it is—need I say?—nothing of the sort, but rather an intellectual perception gained consciously and unconsciously from experience. It is what Adam and Eve cannot have had when they named and classified the objects of creation; it is what the nonsense story supposes them to have had when it makes Adam say "Hullo! that looks like a pig: let's call it a pig!"

"Dorvel's" proposed building does not look like a bank, and nobody would call it a bank until they had learnt that it actually was one. The emphasised piers of its upper stories suggest that the floors in this part are mere secondary divisions of a large space (the galleries in a stack-room, for example), or, alternatively, that there are long spans within, demanding great strength from the piers which support them. The very broad piers at the corners, pierced with very small windows, could have no constructive justification in any case, not is it easy to imagine their being the logical expression of any reasonable plan. The treatment of the frieze suggests a building dedicated to the humanities, and is as out of place in a commercial building as the classical fables with which advertisers of building materials hope to catch the eye of the half-educated. In itself it is a good frieze, with a good cornice above it and, of its kind, a good wall-design below it.

The general unsuitability of the façade of this design is a great pity, since the plans have peculiar excellences and compare favourably in almost every respect with all of the others submitted. Before speaking of these plans I must point, with regret for the necessity of constantly finding fault, at a defect in the design (otherwise excellent) of the banking hall as shown in section. Three arches are

shown in the three intercolumns of the peristyle where the main entrance is. What are these arches for? I presume merely to differentiate the entrance intercolumns from the others. Arches are constructive features and cannot be used in this way. Had the entrance columns been wider than the rest, there would have been a justification (intellectual, if not physical) for their arcuation; seeing that they are not, the observer is forced to suppose either that the arches are vanity or that the lintels in all the other intercolumns, having no arches, are in danger of breaking.

"Dorvel's" plans, as I have already said, are excellent; the points in which they fail are of too little importance to call for comment; the points in which they succeed are those essential to the solution of the problem before the competitors. This problem—may I remind you?—was to place upon a site measuring two hundred by one hundred feet the head office of an English bank, providing all the usual accommodation required in such a building, this accommodation being specified in the programme. One of the long sides of the site is supposed to face a large square, the short sides are bounded by streets sixty feet wide, and the remaining long side lies along a back street of little importance.

The paramount feature in such a building is the banking hall, upon the proper placing of which the success or failure of the plan must depend. The banking hall must be lofty, and therefore must run through more than one storey of a building where the need for loftiness does not exist elsewhere. It may be, and probably must be, lit from the roof. Obviously, therefore, it should be in the midst of the building, and assume more or less the form of the court of an exchange glazed over for protection from the weather. Round this hall on the upper storey must run a gallery or passage, either open to or screened from the hall, to give access to the rooms on the various frontages.

Second in importance to the banking hall is the board room, for which if there were only the convenience of that room to be considered various positions would be eligible. I think, however, that on the site specified in this programme there is only one proper place for the board room, and that is where "Dorvel" has put it—on one of the side streets in the middle of a return front. The site is in form of a double square, therefore any reasonably proportioned banking hall placed in the middle of it is bound to leave broader spaces at either end than in the middle and at the back, and it is only in these broader spaces there will be room for the board room. To put it at the back is unthinkable, but to put it centrally in front is tempting. A breadth of one hundred feet, however, is too narrow for a board room, a passage, a banking hall, another passage, and a room at the back; and those competitors who have attempted this subdivision have been forced either to make the divisions

too small or to squeeze one of the divisions out altogether. The consequences of such wrongdoing we shall see immediately, but before leaving "Dorvel's" design I will ask the other competitors to observe the way in which the adoption at the outset of the right *parti* simplifies the business of plan making. "Dorvel," by not trying to force any preconceived notion of architectural effect upon the stubborn utilities of the problem before him, has made a plan which is not only the simplest and the most convenient of those submitted, but also the most architectural—a plan which only needs more suitable elevations to make a noble building worthy of its purpose and of the skill and labour of its author.

The plan of "Varet's" design shows the board room placed in the middle of the main front, and interrupting the circulation of the floor on which it is placed. The passage which should run behind it has been squeezed out; otherwise this is a plan with many merits, none perhaps striking enough to demand especial indication. The banking hall on the ground floor is too full of piers in effect, though actually these are not placed so as to be unduly obstructive. The staff entrance and the public entrance to the foreign department balance each other on the main front, thereby giving undue prominence to the former and depriving the latter of its proper importance. The elevations are well designed of their kind, and appropriate enough. The wrong position of the board room on plan has enabled "Varet" to obtain the emphasis of the central portion of the main façade which the soul of man normally desires. Such emphasis in this problem should rather have been laid upon the entrance and the entrance alone—since it is the way to a far larger and more important room than any which shows upon the façade. "Varet's" doorway appears no more than the entrance to the building, which is seen. The architect alive to the full possibilities of his design would have made it appear, as it were, the mouth of a tunnel through the building which is seen to something vaster beyond.

The design labelled "Euxine" has this big entrance, and profits greatly by it. The plan suffers in health from a misplaced board room, but otherwise has some merits. The section of the banking hall, however, is bad and narrow, showing every symptom of disease due to overcrowding—the board room again! The heavy cornice in this design has no existence in the preliminary esquisse and greatly changes the character of the finished elevations from that first intended.

"Vitration's" esquisse is attractive at first sight, but the setting back of part of the upper storey is a reckless thing for a competitor to commit himself to at the outset of a problem likely to prove a complex one. This, I think, is what "Vitration" has found; the finished plan of his upper storey is probably different from what he hoped it would be in his first dream of Devonshire House. The back block of his plan is reduced to a ridiculously thin ligament of strung out typists' rooms and passage, and the ground floor plan shows a circular lobby at either end of the banking hall without any apparent justification. Altogether there has been too much preoccupation with scenic effect in the making of this plan; and the artificial reduction of the depth, on the upper floors, of a

site already inconveniently shallow, has produced as many bad results as might be expected. Not that "Vitration's" arrangement has not some good points; it has several, but they do not and never could counter-balance his initial wrongheadedness. He appears from his half-inch scale drawings to be able to design detail of charm and distinction.

"Finance" aims at palatial character and secures it; though not positively unsuitable for a bank his elevations do not suggest that behind them can be light and pleasant rooms for people to work in. The singular *parti* which he has taken in the arrangement of his plan results in the banking hall spoiling everything else on the ground storey and cutting the storey above into two. The architecture has merit of its kind, but the smallness of the windows would make it entirely unsuitable for England.

"Lexis" puts a useless dome over the centre of his long banking hall, treating that hall as a Greek cross with lengthened lateral arms, a self-contradictory shape which can never look well—the dome being too important as a mere incident at the crossing of two galleries, and not important enough as the central feature of so large an area. "Lexis's" board room is really dreadful.

"Lombard" interprets the permission given in the programme to use mezzanines as allowing a whole upper basement storey between the basement proper and the ground storey. This frees his principal storeys from the slight congestion apparent in many of the other designs, but "Lombard" does not seem to have profited by this freedom, though he has placed his board room correctly. His elevations are more absolutely unsuitable in character than any others submitted; if they suggest anything, they suggest a Woolworth's store.

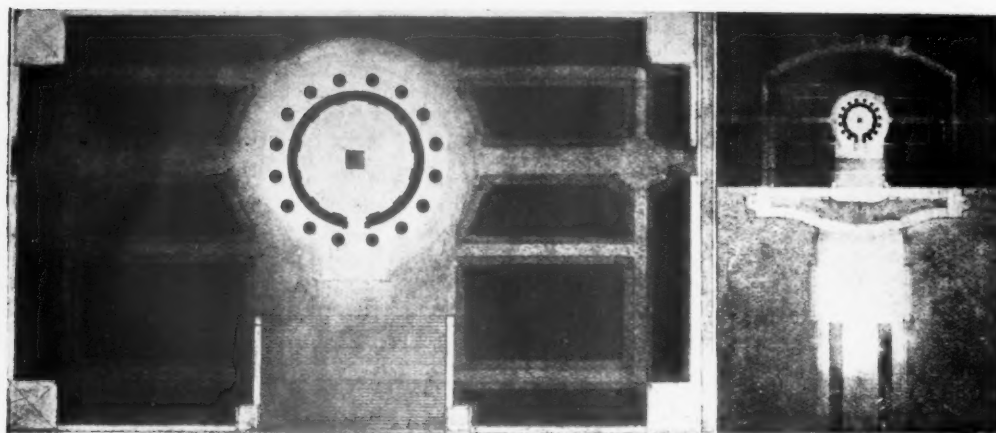
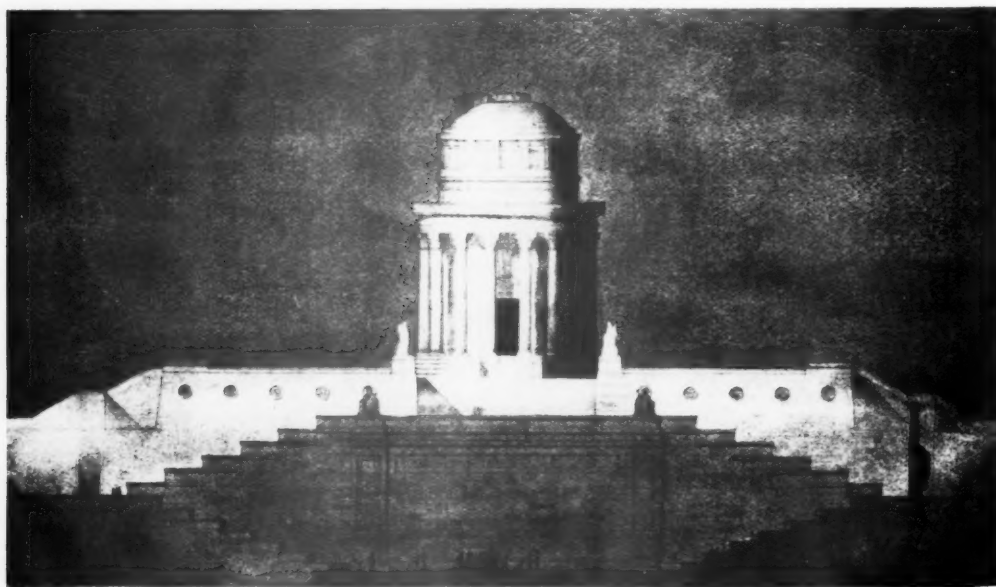
"Pardi" submits two designs, one shown in his esquisse, the other in his finished drawings, and accompanies these with a composition of M. Brandt's and M. Simonet's ironwork details to half-inch scale. The design shown in his finished drawings, if it called for serious judgment, would be at once put *hors concours* on account of its departure from his esquisse. It does not, however, call for serious judgment; rooms seven feet across, and a board room fifteen feet across, make the plan a curiosity in its way; and the ironwork, with its familiar baskets and its floral forms compressed into a sort of galantine, is of the luxurious character delightful in the surroundings of beautiful and expensive women but singularly out of place as a purdah screen for bank clerks.

"Blisco" also submits two designs, one shown in his plans, the other in his elevations. His manager's room is lit by threequarters of an immense arched window into which the party wall runs; his board room is lit by a row of glorified loopholes. For no discoverable reason a small waiting room on a lateral façade is given another immense window, where all the surrounding windows are of reasonable size. There is, I believe, a school of thought in revolt from Victorian theories of architectural truth which glories in mendacity such as this, but to the reasonable man there can be little intrinsic appeal in either the inconvenient avowal or the purposeless negation of an architectural fact. Experience teaches us, however, that so far as a good plan will design its elevations for us, it will do it better than we should, and that our proper

function is to let it do all it will and then step in with the finishing touches of emphasis and adjustment. "Blisco's" elevation is certainly not worth imposing for its own sake

THE TITE PRIZE.

The design bearing the pseudonym "Bonzo," to which the Tite prize is awarded, owes its supremacy to qualities



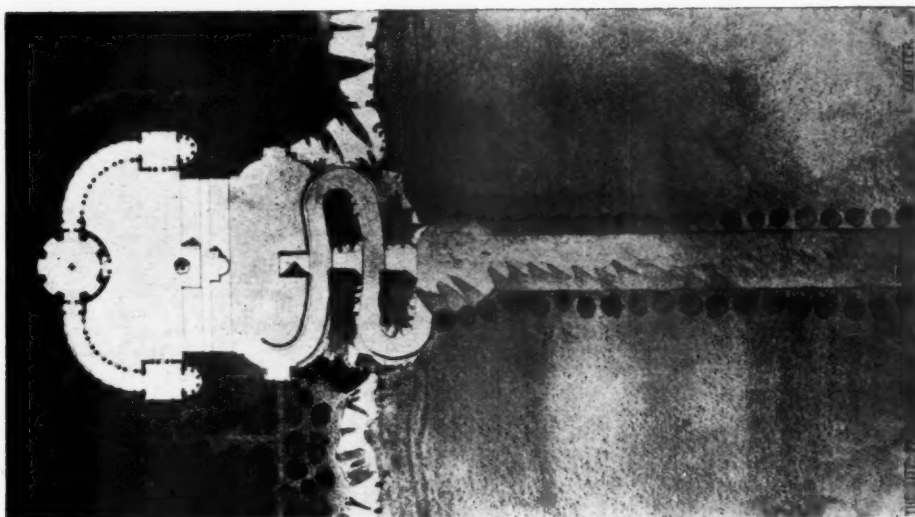
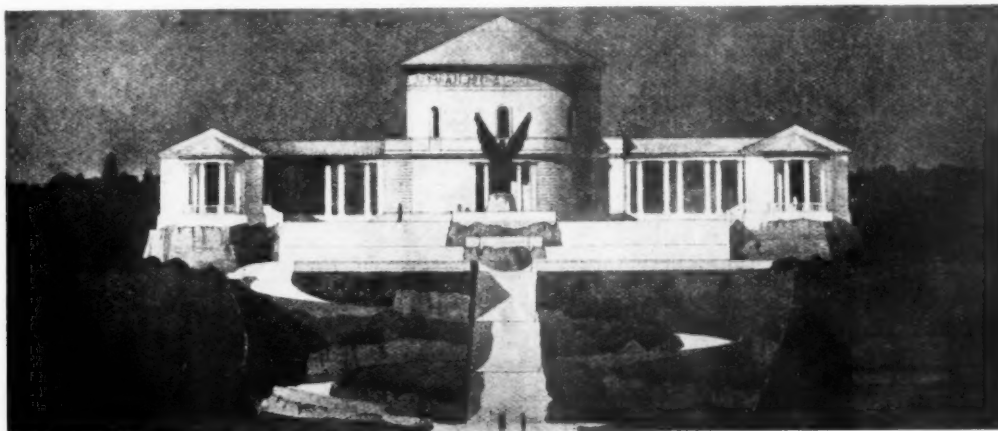
A MONUMENT TO A NATIONAL HERO. By A. Calvaley Cotton
(Awarded the Tite Prize)

upon a plan which it does not fit; on the other hand, if it *did* fit, it would suggest that there was something wrong with the plan.

which will not appeal to the romantically minded. It is appropriate, it is reasonable, it is controlled, it is realisable, it has just that sober gravity and dignity which its purpose

demands, without any exaggerations or sentimental fantasy. To some minds, the notion of a monument to a national hero demands for its realisation that which ignores the appropriate, which transcends the reasonable, which scorns control, which reckons nothing of realisability; in short, the word "hero" sends some people off their balance altogether. Perhaps in a

tended towards pettiness, and "Bonzo" is more lonely than he should have been in his perception of the proper scale for a monument amid the specified surroundings. His esquisse suggests that this perception has come to him in the working out of his design, since his first notion looks more like a summer-house in a back garden than a commemorative hall on a cliff forty feet high. In this esquisse,



A MONUMENT TO A NATIONAL HERO. By T. Murray Ashford

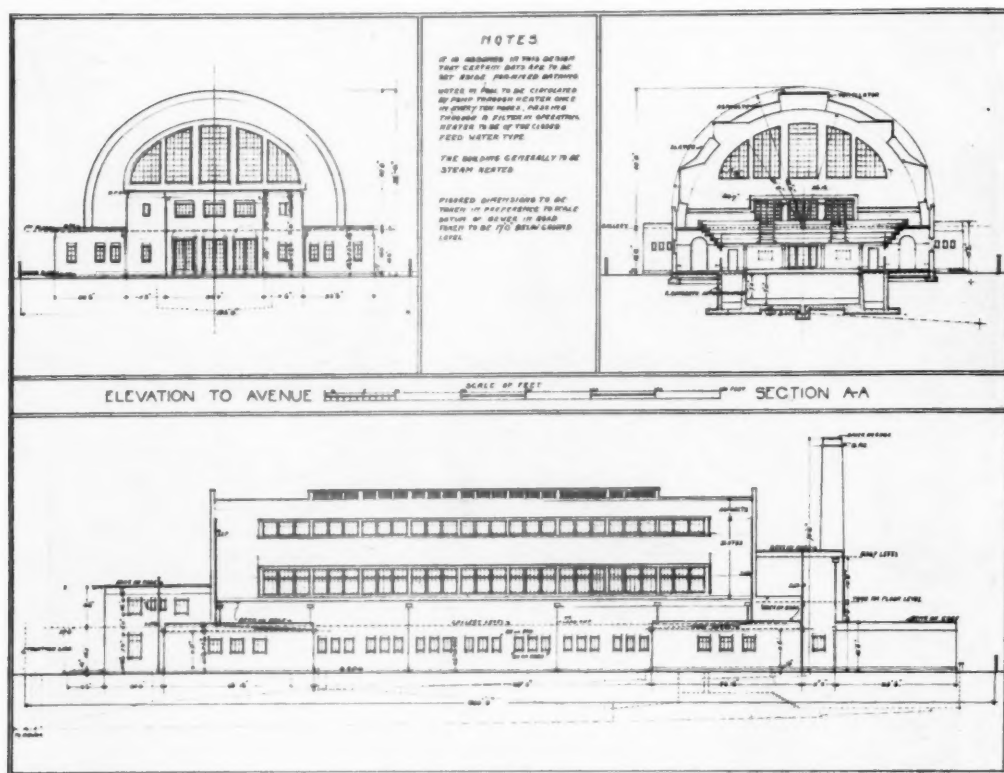
competition such as this a certain amount of chimerical fancy would be excusable, seeing that no more emotion would be allowed by the programme than could be set upon a platform 200 feet by 120 feet. I do not think it regrettable however, that, with two exceptions, none of the competitors for this prize have shown even the mildest symptoms of megalomania. Rather have they

however, the appropriate simplicity is realised, and this simplicity has been the making of the finished design. The detail of this design is good—better, I think, than the general contour of the dome and its drum. The latter appears to me too high for the former. "Bonzo" has plainly been thinking of the effect of his temple seen from below and has been alarmed lest in perspective the cornice

of the peristyle should hide too much of the drum. He has, therefore, heightened the drum, but he has also flattened the dome. I think that if his design were built as it stands, he would find that from one standpoint the dome would look right but the drum would look too high, and that from another the drum would look right but the dome would be invisible.

"Bonzo's" steps up the cliff are adequate and in good proportion—the terrace also, by appearing well-shaped,

related in style and form to the design of the exterior. The exterior in itself has great charm but lacks the true monumental character. For a pump room at a spa it would need little adaptation. The manner of the approach up the cliff whereby a single road in lacets is crossed by a monumental flight of steps is none the worse for being borrowed from a design well known to many of us: it is an excellent expedient and one very suitable to the hypothetical conditions of this site. The road, however, is a little steeper



A SWIMMING BATH. By John William Wood
(Awarded the Grissell Gold Medal)

shows that he has conformed his design skilfully to its obligatory dimensions. The lay-out of the terrace, however, is weak and meaningless.

"Cotter's" design shows a far more imaginative solution of the problem. His esquisse is extremely good in its crystallisation of an idea, and the working out of this idea has been faithfully and logically done. Unfortunately, the idea is not of the most appropriate—a winged building of this kind should close a vista; not stand bleakly upon a cliff exposed to view from all angles. Also, the interior of the hall shown in the section is entirely un-

than it need be—a wider spread of the lacets would have done no harm.

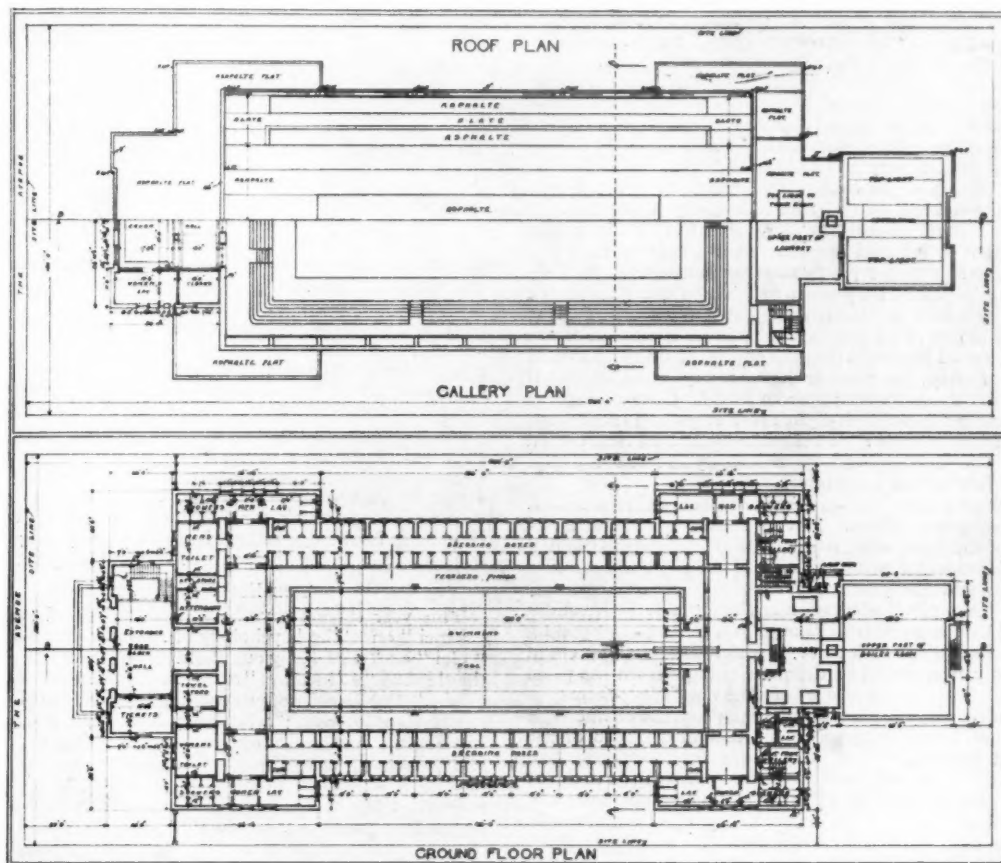
The same manner of approach appears in "Koko's" design, but so unskilfully applied as to leave the contour of the flanking cliff in insoluble doubt. "Koko's" commemorative hall is of absurdly small scale; the oblong form chosen for it, though suitable in itself, is one for which there is not room on the platform specified.

"Ulysses" also tenders an oblong building, of more adequate scale. In his esquisse he proposed a central

cascade down the cliff which he wisely abandoned in his working out. Immensely lofty portions of his building are walled off as "cloak rooms" and "storage." "Ulysses" must really cultivate common sense.

So, too, must "Rizz," who reads his programme oddly. As a commemorative hall the Albert Memorial would prove somewhat draughty, yet "Rizz's" "hall" provides little more shelter than does the Victorian

porches he has regretted in the development of his design and has abridged in a manner which only makes matters worse. In other respects "Kuklos" has evolved his esquisse into a really remarkable collection of souvenirs of Paris, some of which, the lower group of steps for example, are really handsome in themselves. Unfortunately, in order to get them all in he has lowered the scale to a point at which all that should be majestic is



A SWIMMING BATH. By John William Wood
(Awarded the Grissell Gold Medal)

masterpiece. As a design for a monument having no relation to this competition "Rizz's" project shows good outline and proportion. His detail is respectable, of the style current in the nineties of the last century.

"Kuklos," in an esquisse drawn in a tight style likely to prove harmfully constrictive of first notions, shows a scheme not very characteristic but reasonable enough in the main. It is disfigured, however, by useless colonnaded porches stretching out on either flank. These

merely trivial. The contour of his steps also is such that, from below, his building would appear disagreeably buried in the ground.

"Moss," on the other hand, has managed his steps admirably; his platform with the approach to it is as good as anything in the room. The building surmounting this platform, however, is of bad form, a square with a small square tower rising out of the middle of it. Seen from a distance its size would be impossible to estimate

and its silhouette on the diagonal would be displeasing. In character it seems fairly suitable, and had it been slightly larger and cruciform externally, so that the tower lines were carried to the ground, it might have been successful in scale and outline.

"Hatikuoh" assumes a rocky promontory instead of a cliff, which is to misread the programme. His plan is a Greek cross with the corners filled in. He provides car parks at the bottom of the cliff and interrupts his great steps with a "rest place" which makes nonsense of the whole staircase. The dome with which he surmounts his hall seems curiously out of character with the remainder of the design, but in itself is of good contour, easily readable from a distance.

"Avanti" is enormously ambitious and deserves credit for enterprise. He conceives his commemorative hall as standing on the very brink of the cliff so that the entrance to it must be at the back. The cliff itself is faced with masonry and led up to by an immensely broad flight of steps. Having reached the cliff, pilgrims to the hall must turn right or left and complete their ascent up flights of steps leading to the platform on either side of the hall. On this platform they must proceed to the back of the building where is placed the great entrance.

The object of all this ingenuity is an attempted stroke of drama. I have said that the cliff is led up to by a great flight of steps, but what is that gateway in the cliff itself to which these steps appear to lead? Gaze through it and you see in the half-light more steps and more steps again rising to what? To the cenotaph of the hero buried in the bowels of the cliff but brilliantly lit from an orifice in the floor of the hall above.

Now this is an anti-climax, or rather a climax turned the wrong way about. Having looked up at the cenotaph of the hero, what is the good of climbing to the hall in order to look down upon it? If the city had been on a plateau and the commemorative hall on the plateau's edge, "Avanti's" adaptation of the tomb at the Invalides would have been suitable enough; an inaccessible opening in the face of the rock through which the cenotaph could be dimly seen would be dramatic enough from the plain below. The architecture of "Avanti's" scheme is magnificent in intention but not happy in the character of its detail, which suggests to me that of a casino of the second Empire.

"Scale" has still more magnificent intentions and still less happy detail, and I fear that nothing whatever can be said in praise of his scheme. Its chief peculiarities are the gridiron of colonnades spread over the approach to the hall and the high sham dome raised over the real dome of that building.

"Amber" has missed the character of a memorial altogether and draws in a curiously old-fashioned manner which suggests Early Victorian research.

"Omega" should study more before he attempts problems of this kind.

GRISSELL MEDAL.

For the Grissell Prize this year only one design has been submitted, but had there been many more I think it likely that this one would have been the winner. In it the programme is admirably realised, and both plans and elevations are models of their kind.

ALFRED BOSSOM TRAVELLING STUDENTSHIP.

For the Alfred Bossom Travelling Studentship there are three contestants, but here again there can be no doubt of the superiority of the successful design. "Huck" and "Chota" submit ordinary schemes save for the extraordinary vagary by which "Chota's" shops are grouped round a formal garden; but "Hat's" proposals have the novelty that comes from doing a simple thing a great deal better than it is customarily done. "Hat's" scheme and calculations show care, but the price of 1s. 3d. per cubic foot which he allows for his building is obviously at least 6d. below the mark. Also the various maintenance and caretaking charges for which he allows £100 per annum would probably amount to twice that sum. Nevertheless, the whole project is reasonable and well thought out, and the architectural treatment charming.

THE OWEN JONES TRAVELLING STUDENTSHIP.

The Owen Jones Studentship, like the Grissell Prize, is only aimed at by one competitor this year, and again, as with the Grissell Prize, that competitor has done very well indeed. "Michael's" "theatre in a private house" is decorated as such a room should be; both the painted panel and the large scale embroidery detail are admirable.

For neither the Henry Saxon Snell prize nor the Essay prize is there any age limit, the intention of both being rather to get results than to give experience to the young student. Hospital planning, owing to the rapid developments of medical theory and practice, is a science that never stands still, and the purpose of the Saxon Snell prize is to encourage progress and experiment in the architectural provision for up-to-date requirements. The purpose of the Essay prize is to obtain for the profession valuable contributions to knowledge rather than to reward young architects for undergoing the pains of literary composition.

THE ESSAY MEDAL.

This year three essays have been submitted—one by "Vinci" on "The Psychology of Architecture," one by "Gai" on "The Religious Buildings of the Parsis," and the third by "L'Inconnu" on "The life and work of James Gibbs." Peculiarities of punctuation make "Vinci's" essay troublesome to read; when they have been discounted his English appears as admirable. He writes with skill and a sense of literary beauty; he makes to a large number of authorities a large number of references, of which no more than the usual proportion is unnecessary; he divides his material sensibly and orders it well. The defect of his essay is that which he himself has perceived when he was forced to put on the title page, beneath the heading "The Psychology of Architecture," the words "(in outline)". His essay is not an essay, it is the skeleton of a book. As a testimony of study it is superb; as information it has little value; as reading matter it has the effect upon the mind of an index. If "Vinci" would win the Essay prize in another year he must choose a smaller subject, must quote less and construct more.

"Gai's" essay is a mass of information, very fully illustrated by photographs and drawings. After explaining the theory and ritual of fire-worship, the author traces the developments of buildings dedicated to the cult from earliest times to the present day. The continuity of tradi-

tion which he exposes is interesting, but does not seem to have saved this particular architecture from latter-day degradation. The jury recognises "Gai's" industry and perseverance, but does not feel that either his presentation of his material or his power of expression in the English language is such as to justify the award to him of the medal.

"L'Inconnu" submits a monograph on James Gibbs, expensively bound and full of photographs and drawings. With great industry he has examined and attempted to identify the works of Gibbs mentioned in that architect's own book, in the manuscript memoir in the Soane Museum, and in the Dictionary of Architecture. As a document his list of Gibbs's works has value, and his collection of photographs is interesting and representative. His account of Gibbs's life is probably as full as it can be made. His drawings are painstaking, but those showing architectural detail suggest that he has but slight acquaintance with the forms and proportions so meticulously laid down by Gibbs himself. He also is lacking in the critical faculty, giving unsupported opinions of a kind not likely to command much respect on the merit of the buildings he describes. The jury, while applauding his industry, has therefore not thought him qualified for the reward for which he competes.

THE HENRY SAXON SNELL PRIZE

The subject for the Henry Saxon Snell prize this year

was an Out-Patient Department attached to a General Hospital of 200 beds, and has attracted two competitors. For some time it has been apparent that the old system of planning such a department in which out-patients re-pass through the hall after receiving medical or surgical attention has ceased to be thought satisfactory. Experiments that have been made towards the obviating of the defect by means of external passages have brought disadvantages in their train, and the possibilities of compromise call for systematic investigation. Apparently neither of the competitors has been alive to the existence of this problem, and their schemes are of the long-accepted kind which there is no necessity for a competition to produce. "Ubique" submits an inconvenient arrangement of two storeys with an elevation which calls urgently for plastic surgery of a drastic kind. "Germ" submits a better scheme on one storey, which of its kind has no very serious defects. It is very well presented; the elevations are poor, but reasonably honest.

Over the measured drawings submitted for the Silver Medal I should like to draw a veil. In the best of three sets submitted there is to be seen the phenomenon that a student who can draw Early Renaissance carving accurately enough supposes that the flutes of a spirally fluted column can be ruled in diagonally on elevation with a set-square.

Vote of Thanks to Mr. Goodhart-Rendel

(THE PRESIDENT, MR. E. GUY DAWBER, IN THE CHAIR).

Professor E. A. GARDNER, Litt.D. (Vice-chancellor, University of London): I have to move a vote of thanks to Mr. Goodhart-Rendel for the charming and witty way in which he has carried out his duties. I suppose very few people who have not had to do such a thing can realise what an extremely difficult thing he has had to do, and I think you will all agree he has done it admirably. His criticism has not only been witty, but I think it has also been kindly. I do not say he has not pointed out anybody's faults, criticism would be of very little use if the critic refrained from doing so altogether—but I feel that there is no malice in it, and those whose works he has criticised will feel grateful to him for the criticism rather than offended at any detail.

The PRESIDENT: Professor Leslie Wilkinson, Honorary Secretary of the Royal Institute for Australia, is with us to-night, and I am sure he would like to second the vote of thanks.

Professor LESLIE WILKINSON [F.]: We have listened to-night to an extraordinarily valuable and interesting criticism. I am sure that the competitors will have appreciated it, and no doubt some appreciated it more than others; I suppose it is pleasanter to listen to favourable criticism than to criticism with a little bit of "spur" in it. But a spur is always useful, and I am sure they will have accepted the criticism in the spirit in which Mr. Goodhart-Rendel made it. I think that to-night a new departure has been made in having this criticism on the same night as the announcement of the awards; and it seems to me that is a move which will be very welcome to the student body. I think it is

borrowed from the Royal Academy. I am certain it must have given some very exciting moments to the competitors, and added very greatly to the whole interest of the proceedings. Criticism such as we have heard to-night is a thing of which we have far too little. I think our modern architecture would be enormously improved if such criticism could be applied very much more generally. I am sure Mr. Goodhart-Rendel will not mind if, in seconding this vote of thanks, I suggest that we might look upon this annual event as a kind of Commemoration Day, a commemoration of the benefactors of the profession whose names we have heard to-night in the titles. If it had not been for the Soanes and the Tites, the profession would have been the poorer, and I am certain that a great many fine works would have been lost to the country. Incidentally, I think the names of Soane and Tite are probably better known to us than they would have been if their fame had rested merely on their buildings. Perhaps this idea may lead to many more scholarships being founded than those which we have commemorated. May I suggest, too, that in thanking Mr. Goodhart-Rendel for his criticisms, we also remember the work which has been done in the last few weeks by the juries who have produced the Award for the Council. It is rather a thankless task, I daresay, and I am sure the competitors and students, and all members of the profession, would wish to thank the members of the Institute who devoted their time to the drawing up of the programmes and then assessing the work. We have had a criticism which has been a very broad and helpful one. Some people seem to think that criticism is only fault-finding; but Mr. Goodhart-

Rendel has shown that a fine criticism is also an appreciation; in fact, perhaps a better word would be a just assessment. I have very great pleasure in seconding the vote of thanks to Mr. Goodhart-Rendel for his criticism.

The PRESIDENT: I should like to add my thanks and congratulations to Mr. Goodhart-Rendel for the really charming address and criticism which he has given us to-night. I am sure we have all thoroughly enjoyed

it quite as much as have the students who have competed for these prizes. In one way, as an Institute, we feel a little bit disappointed that the result of the competitions is not quite so good as we had hoped; but Mr. Goodhart-Rendel has reassured us on that score by saying that it is only good material which is deferred for another year.

The vote of thanks was carried by acclamation.

Mr. GOODHART-RENDEL briefly replied.

The Thirteenth Exhibition of the Arts and Crafts Exhibition Society at Burlington House

[BY A. R. POWYS [4].

This is not so large an exhibition as was held three years ago. The work still maintains a very high standard, and there are few things that it would not be a pleasure to possess and many that are very desirable. I do not write about the needlework, jewellery or pottery because they possess less architectural qualities and not because they are any less beautiful or well finished.

I imagine that there can be no disagreement that the two pieces of sculpture—the cart horses—by Mr. William G. Simmonds, are outstanding works of art. Their history is not uninteresting. Mr. Simmonds intended to use the wych elm for the large single mare, but when he started work he found a flaw within the wood and had to cut deeply to remove it. The remaining block suggested two rather than one animal. With this experience he cut the black mare from laminated mahogany, beautifully fitted together. Mr. Simmonds's drawings of the centre post French mill are valuable, particularly that which shows the works, for no more of these buildings are now made and, like ships and wagons, these structures have a long traditional history very well worth study.

The Snowy Owl, in Portland stone, by Mr. Herbert W. Palliser, is an exquisite work most subtly modelled. The pieces of furniture and the fittings for candles and lamps, designed by the late W. A. S. Benson, are of considerable interest. They illustrate very well the change which has taken place in the last 40 or 45 years. Further, although some of these, because they show a way of thought different from our own, may be too easily ignored. One seems to learn from them that to design rather consciously in the fashion of a period is not to work for permanent beauty. Two candelabra by Mr. Benson are certainly outside any suggestion of this sort and still are, as they were then, fine works, skilfully made and graceful to see.

Of more directly architectural merit, Mr. George Jack's design for a chancel screen for St. Andrew's Church, Uxbridge, deserves close study, for it is of that kind which is not immediately appreciated. Mr. Jack spent many years in Philip Webb's office, and although his work is very individual we can recognise the influence of that master. In the Exhibition there is a silver teapot designed by Philip Webb and made by Mr. R. Catterton

Smith for Mr. Charles Winnill. This should be seen by those who admire Webb's work and there must be very few who do not.

As on other occasions there is a great quantity of beautiful furniture, and from this we can see that those who both design and make furniture are very much more favourably situated than those who get their designs carried out by others. Thus the table made for Sir Robert Lorrimer and the chair made for Mr. Herbert Baker both appear clumsy by comparison with other pieces in which the maker could vary the mouldings or the sizes of his wood as appeared desirable when the material was in his hands.

The pieces of furniture which I particularly noticed as very good were: Mr. Charles Spooner's room standard for electric light, Mr. Romney Green's cabinet of English walnut, Mr. Waal's bureau in English walnut made in his works for Mrs. C. Biddulph. This last piece is very closely in the Gimson tradition. Another notable work of the same school is the walnut "dresser" by S. Gordon Russell. Of the younger men who make furniture, and make and design it no less well than their predecessors, is Mr. Edward Barnsley. The bookcase of English walnut inlaid with ebony is the most important and perhaps the most beautiful of his pieces. It belongs to the same school of thought and represents a natural development of the Sapperton tradition. A chair in English walnut and a folding tea table in the same material are also excellent.

There is, however, one aspect which all the exhibits have in common: they can only be owned by the comfortably-off, for although relative to the work put into them they are cheap, when considered in relationship to life they are too costly for the average man. The exhibition is essentially one of hand-made things. Therefore the machine is nowhere in evidence; yet I should like to see some pieces at least in which a great part are the product of factories and in which the handicrafts are only used for the more highly-finished parts.

*** In the announcement of the Arts and Crafts Exhibition in the last JOURNAL (p. 151) the initials of the name of the late Mr. W. A. S. Benson were given as A. C. Benson.

MAP TO INDICATE THE DISTRIBUTION OF THE SCHOOLS OF ARCHITECTURE

*recognised by the R.I.B.A. for the purpose of exemption
from the Intermediate and Final Examination.*

Key

Schools recognised for
exemption from the R.I.B.A.
Intermediate Examination.

Schools recognised for
exemption from the R.I.B.A.
Final Examination (except
Professional Practice.)

List of Schools

ABERDEEN

- Robert Gordon's Colleges

BIRMINGHAM

- The School of Architecture

BRISTOL

- Royal West of England Academy

CAMBRIDGE

- The University

CARDIFF

- The Technical College

EDINBURGH

- The School of Art

GLASGOW

- The School of Architecture

LEEDS

- The School of Art

LIVERPOOL

- The University

LONDON

- The Architectural Association
- The University
- The Northern Polytechnic

MANCHESTER

- The University

NEWCASTLE

- Armstrong College

SHEFFIELD

- The University



Board of Architectural Education

FIRST MEETING OF THE RECONSTRUCTED BOARD, 18 JANUARY 1926.

THE OPENING ADDRESS OF THE CHAIRMAN (MR. MAURICE E. WEBB).

Mr. Webb said: As this is the first meeting of our reconstructed Board of Architectural Education, may I say a few words.

Hitherto this Board has been composed entirely of architects, but this meeting to-day is the outcome of an attempt by the Council of the R.I.B.A. to introduce the broadest possible principles into the education of those who are going to enter the profession.

So many questions of general education come before us in the course of our deliberations relating to the education of architects, draughtsmen, and others employed in the art of building, that we feel the need of the assistance of representatives of lay opinion to come to our Councils and help us.

We architects take a great interest in the training of our young men in a profession which we believe to be important to the community, and it is very pleasant to us to find that the great educational bodies throughout the country are prepared to co-operate with us in endeavouring to find the best way not only, we hope, of producing good architects, but also of creating some appreciation of what is good architecture and good building amongst the members of the public, for both are important to every one of us wherever we live.

The new Board is the result of this co-operation, and we thank H.M. Board of Education, the Universities, the London County Council, the Institute of Builders, the Headmasters' Conference, and others for sending of their best to give us of their experience in the problems confronting us.

For those who are new to us, and do not know the details of the organisation of this Board, it may be of some help to explain it very briefly.

Our work is divided into three branches: the managing for the R.I.B.A. of our examination system, the managing of our scholarships and prizes, and the helping and advising of schools of architecture.

In those three activities we have some influence in varying degrees throughout Great Britain and all our Dominions, but we are not in any way a teaching body.

To simplify the work of this large and comprehensive Board we have appointed three Committees:—

1. *The Schools Committee*: to keep in contact with all the schools teaching architecture and to help where help is needed.

In touch with this Committee is a Visiting Board of practising architects who visit and report on all schools seeking or receiving exemption from our

examination. The idea underlying this is that it is absurd to multiply examinations, and that where we are satisfied that school standards are as good as or higher than ours, we will not ask their students to sit again before admitting them to our part or whole membership.

2. *An Examinations Committee*: who deal with our own examinations.

In touch with them is a small Board of Moderators, also composed of practising architects, whose function is to keep a level standard in our examinations. At present, two architects join the Institute through our examinations for every one who enters by exemption from the schools.

3. *A Prizes and Scholarships Committee*: whose function is to set the subjects and judge the results through juries whom they appoint.

As a Board we shall receive at our meetings the reports of these three Committees for approval or otherwise, and, in addition, consider questions of general educational interest which will from time to time come up to us direct.

These three Committees have power to settle all questions of routine, and we hope, by this arrangement, that the time of this Board may be conserved for things that matter more than routine, and for consideration of reports to the Council of the R.I.B.A., who have the final word in matters of principle and finance.

We hope great things from your deliberations which may mark, I venture to think, a new development in professional education by directing the stimulating currents of lay thought into what have been described as the narrow channels of the professional mind.

Correspondence

"THE CONDITION OF THE BUILDING INDUSTRY AND INCREASED COST OF BUILDING WORK."

39, Maddox Street,
London, W.1.
14 January 1926.

The Editor, JOURNAL, R.I.B.A.

DEAR SIR,—I have read with much interest the paper by Mr. Herbert A. Welch, also the discussion reported in your issue of the 9th inst. By a coincidence, upon the same day as the JOURNAL came into my hands, a book written by myself was published.* A copy has

* *Builders' Estimates and Pricing Data*. (Chapman and Hall, 9s. 6d.)

already been sent you, and if you refer to page 164 you will notice that there is a factor referred to which affects prices considerably, but which does not appear to have been mentioned by the employers' and operatives' representatives. It is possible that the paragraph may be of interest, so I repeat it here, viz.:

"'Constants of Labour.' These are given in many technical books, but practical men seldom use them. . . . Of all the tables published the writer is of opinion that those contained in *Hurst's Architectural Surveyor's Handbook* are still the most consistent; but it must be borne in mind that the original tables were prepared many years before the War, when the working day was much longer than at present. This fact has a greater effect upon 'Constants' than is apparent at first. The time lost at the commencement and at the completion of the day's work has to be distributed into a shorter length of time than formerly; also the output of the men during the morning hours is not so great as when the men had a breakfast interval. In many cases, especially in large towns, the workmen have to travel some distance, under trying conditions, and obviously are not so fit to commence work as they would be if they could have their first daily meal upon the job. If arrangements could be made for an early start and a breakfast interval we probably would hear less about 'decreased output.'"

I must apologise for this letter, but as you have published the opinions of the architects, the employers, and the operatives, it occurred to me you might care to know the opinion of a quantity surveyor.—I am, dear Sir, yours faithfully,

HENRY A. MACKMIN.
21, Suffolk Street,
Pall Mall East,
London, S.W.1.
13 January 1926.

The Editor, JOURNAL, R.I.B.A.,—

SIR,—The thanks of the community are undoubtedly due to Mr. Herbert A. Welch for his earnest attempt to diagnose and remedy the *malaise* in the building industry.

There is, however, a suggestion of unreality in the discussion following the reading of his excellent Paper, as reported in the JOURNAL, which augurs badly for a revival of the old co-operation of master and man in their mutual interests.

Shortage of "skilled labour" may be accepted for a brief period as a reason for not building with rapidity and niceness of finish, but it is none for not erecting such buildings as are needed.

Reluctance to embark upon a vocation in which energy and ability do not tend towards a greater reward, and in which personal initiative and reasonable freedom of action are stifled, is fortunately a characteristic of British manhood, and until unwise legislation, which has placed wage-earners under the tyranny of their trade unions, has been rescinded, self-respecting youths will continue to fight shy of such trades as are thus handicapped.—Yours faithfully,

JAMES RANSOME [F.]
Abbey House, S.W.
12 January 1926.

The Editor, JOURNAL R.I.B.A.,—

I venture to express the opinion that Mr. Welch's paper on this subject is one of the most valuable and most interesting that has been read at the Institute for many years. That it may soon have some practical result is a wish that must be in the minds of all our members.

My own small contribution to the discussion is that for

many years past I have introduced into my specifications words to the effect that the contractor is to provide sufficient tarpaulin or other protection to prevent the work from being stopped in wet weather. The value of this clause in our climate seems to be obvious.

R. LANGTON COLE [F.].

THE WEATHERING OF STONE.

56 Doughty Street, W.C.1.

10 January 1926.

The Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—At a meeting to consider the best stones to recommend for churchyard monuments, a statement was made by a monumental mason, and substantiated by three or four others, all of whom were men of considerable experience, who came from widely separated places in the south of England, which struck me as being so contrary to tradition, that I venture to report it.

He said that stones, which exude silicate, withstand the action of frost best, if they are thoroughly seasoned before they are masoned and erected as monuments.

By "seasoned" he meant that all the quarry-water should be dried out of the stone before it is worked, and that this was particularly necessary with Portland stone.

I protested that this was contrary to the experience of builders.

They at once said that when a stone was built into a wall with only one-sixth of its surface exposed, it was right to use stone as soon as possible after it was quarried; but that in the case of stone being exposed to the weather on all sides, it would soon flake, if it were allowed to form the hard glassy surface, which is produced by quarry-water.

Yours faithfully,

LAURENCE A. TURNER,
F.S.A., Hon. A.R.I.B.A.

R.I.B.A. FORMS OF CONTRACT.

6 Gray's Inn Place,
Gray's Inn,
London, W.C.1.
18 January 1926.

The Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I have read with interest the letter from Mr. Edmund Wimperis on page 144 of the JOURNAL, which points to a useful reform in the marking of the two documents in question. I do not think it would be necessary to print the whole of one document in red; that is counsel of perfection, but it would be simple and more economical to print the "Note" in red in the articles of agreement at the top of page No. 1, instead of on the detachable slip.—Very truly yours,

W. E. WATSON [F.].

Prudential Chambers,
Banbury.

15 January 1926

The Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The letter published in the JOURNAL of the 9th inst., with regard to the R.I.B.A. forms of Contract, that a discrimination should be made, with or without Quantities, that one should be printed in red, I suggest that they remain as they are with a slip attached requesting that it would be advisable to read them before signing.—Yours faithfully,

F. J. COOKE [L.].

*** Owing to lack of space correspondence on other matters has unavoidably been held over this week.

PARIS EXHIBITION AWARDS.

The following distinctions have been awarded to English exhibitors at the Paris Exhibition :

HORS CONCOURS.

J. M. Easton [A.] and H. M. Robertson [F.]

GRAND PRIX.

Dr. Anning Bell.
Sir John Burnet, R.A. [F.]

DIPLOMES D'HONNEUR.

Maxwell Ayrton [F].
H. M. Baillie-Scott and Ber. sford.

GOLD MEDALS.

Sir Reginald Blomfield, R.A. [F].
Professor A. E. Richardson [F].
Sir John Simpson [F.] and Maxwell Ayrton [F].
Louis E. de Soissons [F].
C. F. A. Voysey.

SILVER MEDALS.

E. C. Frere [F].
W. H. Brierley [F.] and J. H. Rutherford [L].
Edward B. Maufe [F].
Oswald P. Milne [F].
Sir Giles Gilbert Scott, R.A. [F].

BRONZE MEDALS.

Adams [F.] Holden [F.] and Pearson [F].
R. Atkinson [F].
Clough Williams-Ellis.
T. S. Tait [A.].

Allied Societies

MANCHESTER SOCIETY OF ARCHITECTS' ANNUAL DINNER.

The annual dinner of the Manchester Society of Architects was held on 16 December, Mr. Arthur Hope [F.], the President, occupying the chair. Among the members and guests present were :—

A. J. Hope, President, Manchester Society of Architects ; Rt. Hon. M. E. Mitchell, J.P., the Lord Mayor of Manchester ; E. Guy Dawber, F.S.A., President, Royal Institute of British Architects ; the Very Rev. Dr. Hewlett Johnson, D.D., Dean of Manchester ; Edward Fiddes, D.Litt., Senior Pro-Vice-Chancellor, Manchester University ; Isaac Taylor, Past President, Manchester Society of Architects ; Dr. Alfred Réé, President, Manchester Chamber of Commerce ; F. B. Dunckerley, Past President, Manchester Society of Architects ; J. Bradshaw Gass, Past President, Manchester Society of Architects ; Ald. H. Derwent Simpson, J.P., President, Manchester Law Society ; A. W. Hemmings, Past President, Manchester Society of Architects ; Francis Jones, Past President, Manchester Society of Architects ; W. A. Jones, Leeds and West Yorks Architectural Society ; W. M. Reekie, O.B.E., Chairman, Council Royal Manchester Institution ; Samuel

Taylor, President, Burnley Society of Architects ; Prof. A. C. Dickie, M.A., F.S.A. ; H. L. Paterson, President, Sheffield, South Yorks and District Society ; J. Henry Price ; H. C. Fairhurst, Senior Vice-President, Manchester Society of Architects ; Ian MacAlister, M.A., Secretary, Royal Institute of British Architects ; John Swarbrick, Hon. Secretary, Manchester Society of Architects ; G. Sanville, Assistant Hon. Secretary, Manchester Society of Architects ; J. Theo. Halliday, Junior Vice-President, Manchester Society of Architects.

The President proposed the toast of the Royal Institute of British Architects.

Mr. E. Guy Dawber, P.R.I.B.A., in replying, appealed to members of his profession to aid the movement to preserve the amenities and old-world charm of our towns and villages.

Since the war, he said, many of the changes that had taken place were lamentable. Many villages seemed to be copying the worst features of our large towns. It was terrible to see the charm of our villages spoiled by ugly motor garages, with great blank sheets of glass, and their trade signs and symbols. The motor-car, of course, was responsible for this, but really the motor-car seemed to be the Moloch to which we were sacrificing the charm of our old towns and villages—a charm which was typically English.

Again, the whole countryside was being littered with architectural horrors in the shape of small houses built of inferior materials. They did not want State control, but it seemed to him that the time had come when some authority should be constituted in each district to prevent that kind of thing happening. It was largely due to work being put into the hands of ill-trained architects and of local officials who had not had the proper training and who had no local sympathies. Yet, with a little care and judgment, and with some civic body to act as a guide, the thing could be done well and with no more expense.

The Lord Mayor of Manchester (The Right Hon. Miles E. Mitchell), in replying to the toast of "The City of Manchester," proposed by Mr. H. S. Fairhurst [F.], said large buildings, eight, nine, and ten storeys high, were going up in the centre of the city, thus causing a greater congestion of people in the central area, and adding difficulty to the Tramway Committee's problem. If this tendency, for which architects were partly responsible, were to increase, the Corporation would have to face the question of widening the streets to accommodate the growing traffic.

The City Surveyor's department had been authorised to prepare a kind of civic plan of the centre of the city in order that the Corporation should know what was happening and where present-day tendencies were leading. If the architects of Manchester would give special consideration to the town-planning side of their work he was sure they could help the administration of the city very greatly.

The Chairman (Mr. Arthur Hope), said he regarded it as a most hopeful sign that the press was now taking much greater interest in architecture.

"Our Guests" was proposed by Mr. Francis Jones [F.], and replied to by Dr. Alfred Réé, President of the Manchester Chamber of Commerce.

R.I.B.A. Prizes and Studentships, 1926

Deed of Award

The designs and drawings submitted for the Prizes and Studentships in the gift of the Royal Institute are now on exhibition in the R.I.B.A. Galleries, 9 Conduit Street, and will remain open to members and the public until 1 February (10 a.m. till 8 p.m., Saturdays 5 p.m.). The Council's Deed of Award, read at the General Meeting of 18 January, gives the results as follows:—

THE ROYAL INSTITUTE SILVER MEDALS

1. *The Essay Medal and Fifty Pounds.*

Three essays were received under the mottoes:—

1. "Vinci."
2. "L'Inconnu."
3. "Gai."

The Council regret that they are unable to award the prize.

2. *The Measured Drawings Medal and Seventy-five Pounds.*

Three sets of drawings were sent in of the several buildings enumerated under mottoes as follows:—

1. "Nero": six strainers and loose sketches (The Orangery; St. Lawrence Jewry; 34, Great Tower Street, E.C., etc.).
2. "Ilex": three strainers and loose sketches (miscellaneous drawings in Verona, Rome, etc.).
3. "Resurgam": five drawings and loose sketches (Southwark Cathedral, and Screen at Walpole S. Peter, Norfolk).

The Council regret that they are unable to award the prize.

THE TRAVELLING STUDENTSHIPS.

1. *The Tate Prize and Fifty Pounds.*

Twelve designs for a Memorial to a National Hero were submitted under the following mottoes:—

	Sheets.
1. "Cotter"	6
2. "Omega"	4
3. "Rizz"	6
4. "Avanti"	4
5. "Kuklos"	4
6. "Bonzo"	5
7. "Moss"	5
8. "Scale"	4
9. "Ulysses"	5
10. "Hatikuch"	6
11. "Amber"	5
12. "Koko"	2

The Council have awarded the Certificate and, subject to the specified conditions, the sum of Fifty Pounds to the author of the design submitted under the motto "Bonzo*"; and have granted exemption from submitting Testimonies of Study for the R.I.B.A. Final

*Mr. A. Calvaley Cotton, 50 Shrewsbury Road, Oxton, Birkenhead, Cheshire.

Examination to the authors of the designs submitted under the mottoes "Avanti,"* "Koko"† and "Cotter."‡

2. *The Soane Medallion and One Hundred and Fifty Pounds.*

Nine designs for a Head Office of an English Bank were submitted under the following mottoes:—

	Sheets.
1. "Lombard"	4
2. "Finance"	5
3. "Lexis"	5
4. "Pardi"	4
5. "Vitration"	4
6. "Euxine"	5
7. "Dorvel"	5
8. "Blisco"	5
9. "Varet"	5

The Council regret that they are unable to award the Soane Medallion. They have granted exemption from submitting Testimonies of Study for the R.I.B.A. Final Examination to the authors of the designs submitted under the mottoes:—

- "Finance."§
 "Vitration."**
 "Dorvel."††
 "Varet."§§

3. *The Owen Jones Studentship and One Hundred Pounds.*

One application was received for the Owen Jones Studentship under the following motto:—

- "Michael" Strainers 8

The Council have awarded the Certificate and, subject to the specified conditions, the sum of One Hundred Pounds to the author of the drawings submitted under the motto "Michael."***

4. *The R.I.B.A. (Alfred Bosson) Studentship: A Gold Medal and Two Hundred and Fifty Pounds.*

The Council have awarded Silver Medals to the authors of designs accompanied by reports for a Scheme for a Housing Trust undertaking to rehouse 320 persons, submitted under the following mottoes:—

1. "Chota"††† Sheets 2
 2. "Hat"§§§ 3

The Council have awarded the Gold Medal and,

* Mr. Frank Chippindale, 10 Ash Grove, Otley, Yorks.
 † Miss Leonara F. M. Payne, 28 Horbury Crescent, W.11.
 ‡ Mr. T. Murray Ashford, 30 Fountain Road, Edgbaston, Birmingham.
 § Mr. Leslie R. Hiscock [A], 133 High Street, Guildford, Surrey.

** Miss Alison Sleight, 16 Gordon Square, W.C.1.
 †† Mr. Geoffrey R. Barnsley [A], 3 Paper Buildings, Temple, E.C.4.

§§ Mr. H. Thearle [A], 42 Wyresdale Road, Aintree, Liverpool.
 *** Mr. E. Dinkel, 14 Kelsö Place, Kensington, W.8.

††† Mr. E. H. Ashburner, c/o Mrs. Learner, 42 King Henry's Road, Primrose Hill, N.W.3.

§§§ Miss Doris Lewis, [A] 41B Belsize Park, Hampstead, N.W.3.

subject to the specified conditions, the sum of Two Hundred and Fifty Pounds to the author of the design and report submitted under the motto "Hat."*

THE GRISSELL GOLD MEDAL AND FIFTY POUNDS.

One design for a Swimming Bath was submitted under the following motto:—

"Exit": four strainers and book of calculations.

The Council have awarded the Medal and Fifty Pounds to the author of the design submitted under the motto "Exit."†

THE HENRY SAXON SNELL PRIZE. £60.

Two designs for an Out-Patients' Department were submitted under the following mottoes:—

Strainers.

"Ubique" 2

"Germ" 3

The Council regret that they are unable to award the prize. A prize of Fifteen Pounds has been awarded to the author of the design submitted under the motto "Germ."§

THE ASHPITEL PRIZE, 1925.

The Council have, on the recommendation of the Board of Architectural Education, awarded the Ashpitol Prize (which is a prize of books, value £10, awarded to the candidate who has most highly distinguished himself among the candidates in the Final Examinations of the year) to Mr. Christopher Green, B.A., Oxon, of 5, Pickering Place, W., Probationer, 1925; Student, 1925; and who passed the Final Examination, December, 1925.

THE R.I.B.A. SILVER MEDAL FOR RECOGNISED SCHOOLS.

The Council have awarded the Silver Medal for the best set of drawings submitted at the Annual Exhibition by Post-graduate Students of Recognised Schools exempted from the Final Examination to Miss Thelma Silcock, of the Liverpool University School of Architecture.

THE TRAVELLING STUDENTS' WORK.

The Tite Prizeman, 1923.—The Council have approved the report of Mr. J. C. Shepherd [A.], who travelled in Italy.

Owen Jones Student, 1925.—The Council have approved the work of Miss L. F. M. Payne, who travelled in England and Italy.

Pugin Student, 1925.—The Council have approved the work of Mr. D. H. McMorran, who travelled in Durham, Northumberland and Yorkshire.

The R.I.B.A. (Alfred Bossom) Travelling Student, 1925.—The Council have approved the report submitted by Mr. F. E. Bennett [A.], who travelled in America.

A.B.S. SCHEME OF INSURANCE.

The A.B.S. specialises in Life Assurance. In Whole Life Assurance the sum assured and bonus are payable at death and the payment of premiums normally continues throughout life. The bonuses which are usually payable with the sum assured may be surrendered for

cash, applied to the reduction of future premiums or used to reduce the period over which premiums are payable. The Society is not tied to any insurance office and is prepared to offer and advise upon a wide choice of policies in leading companies. Half the initial commission is returned to the assured in the form of rebate and the other half forms a direct contribution to the Society's funds.

Please address all enquiries to the Secretary, Architects' Benevolent Society, 9 Conduit Street, W.1. Telephone: Mayfair 434.

NATIONAL HEALTH INSURANCE.

The Architects' and Surveyors' Approved Society.
26 Buckingham Gate, London, S.W.1.

CONTRIBUTIONS.

The contribution for men is 10d. per week, and for women 9d. per week, 5d. of which is in each case payable by the employer.

ORDINARY BENEFITS.

SICKNESS BENEFIT.—Men, after 26 contributions have been paid, 9s. weekly; after 104 contributions have been paid, 15s. weekly. Women, after 26 contributions have been paid, 7s. 6d. weekly; after 104 contributions have been paid, 12s. weekly.

DISABLEMENT BENEFIT.—Men and women, 7s. 6d. per week after 104 contributions have been paid.

MATERNITY BENEFIT.—40s. after 42 contributions have been paid.

ADDITIONAL BENEFITS.

SICKNESS BENEFIT.—Payable at the increased rates of 22s. per week for men, and 19s. for women.

DISABLEMENT BENEFIT.—Increased to 11s. per week for both men and women.

MATERNITY BENEFIT.—Increased to 54s.

SPECIAL BENEFITS.—Grants made to members entitled to "additional benefits" amounting to the full cost of any optical, dental, hospital or convalescent treatment, also for glasses, surgical appliances, artificial teeth, etc. Members may choose their own institutions, nursing homes or practitioners.

Further particulars and forms of application for membership may be obtained from the undersigned.

HERBERT M. ADAMSON,
Secretary.

FINAL EXAMINATIONS.

ALTERNATIVE PROBLEMS IN DESIGN.

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, AND HIS FULL NAME AND ADDRESS, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects (a) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

* Miss Doris Lewis [A.], 41B Belsize Park, Hampstead, N.W.3.

† Mr. John Wm. Wood, c/o The Architectural Association, 34 Bedford Square, W.C.1.

§ Mr. Arthur E. Cameron [A.], 18 Eastwood Road, South Woodford, E.18.

LXXXV

(a) A design for an *Auction Room and Auctioneer's Offices*, to be situated on the ground floor of a block of office buildings occupying a site 150 feet deep with a frontage to a main street of 80 feet. The front part of the building, to depth of 40 feet, will be carried up an additional five storeys and a separate entrance and staircase must be provided to the offices on the upper floors. A back street gives access to the rear of the site, and this frontage may be carried up an additional three storeys to a depth of 30 feet.

The Auction Room is for the sale of furniture, books and objects d'art which are displayed prior to sale.

The accommodation should consist of:—

- Entrance Hall,
- Clerks' Office and general information outer office with counter and space for the display of posters, etc.
- Large Auction Room with Auctioneer's private room adjoining, and Basement storage rooms beneath.
- Staircase and goods lift to basement and staircase to gallery, if any, of Auction Room.

Drawings required:—

Ground floor plan to $\frac{1}{8}$ -inch scale.

Basement storage plan to $\frac{1}{8}$ -inch scale.

At least two sections through Auction Room, one of which is to be taken through the Entrance Hall, to $\frac{1}{8}$ -inch scale.

(b) Working drawings for Subject No. LXXXIII(a), *A Private Chapel*.

The design for a Private Chapel may, after it has been approved, be re-submitted with the addition of:—

- $\frac{1}{2}$ -inch detail of the whole of the west front and a portion of the connecting colonnade. The drawings to show the vertical section through the wall and plans of the openings at various levels.

LXXXVI

(a) A design for a *Shop Front*. The shop front is to be in an important street and suitable for a firm of high class jewellers. The frontage is 24 feet between centres of 18-inch party walls.

The building over will consist of offices 5 storeys high, one to be in the roof. Access to these offices need not be provided as part of the scheme.

Drawings required:—

$\frac{1}{2}$ -inch scale elevation showing front of building.

$\frac{1}{2}$ -inch plan, section and elevation of the Shop Front.

Detail of portion of ornament to $\frac{1}{8}$ th full size.

(b) Working drawings for Subject No. LXXXIV(a), *A Garage*.

The design for a Garage may, after it has been approved, be re-submitted with the addition of:—

- Complete $\frac{1}{8}$ -inch scale working drawings showing all necessary details, including drainage, of the portion of the Garage containing the chauffeurs' flats.
- $\frac{1}{2}$ -inch detail of the same portion.

LXXXVII

(a) A design for a *Grand Staircase of a City Hall*. The staircase is reached from a spacious Entrance Hall and leads to a suite of Reception Rooms which run along the front of the building over the entrance.

The first floor is 20 feet above the ground floor, which is itself 4 feet above the pavement level of the street.

The design is to show the Entrance Hall and the Staircase together with the Ante-room and principal Reception Room at the top of the Staircase.

No dimensions are prescribed for the space available for the staircase. It is to be appropriate to the dignity of a large City Hall of an important city.

Drawings required:—

- $\frac{1}{16}$ -inch plan of ground floor to show Entrance Hall and Staircase.

$\frac{1}{16}$ -inch plan of first floor to show Ante-room, and part of reception suite.

$\frac{1}{2}$ -inch scale section on main axis.

(b) Working drawings for subject No. LXXXV(a), *An Auction Room and Auctioneer's Office*.

The design for an Auction Room and Auctioneer's Office may, after it has been approved, be re-submitted with the addition of:—

- Two complete $\frac{1}{2}$ -inch scale sections through the Auction Room, sufficient to show construction and materials.

LXXXVIII

(a) A design for a *Suburban Electric Railway Station*. The station will be built parallel to a main road, from which it is set back 50 feet. There are two lines in a cutting 14 feet below the level of the roadway.

Entrance and Booking Hall of not less than 2,000 feet super, containing island booking offices and six small shops or kiosks. A left luggage office and cloak-room, small office for travelling superintendent, mess room for porters and booking clerks with kitchen, store, signalling room and lavatory accommodation for men and women.

This accommodation will be on the up side, the down side having a covered platform only, to which access is gained by a bridge and staircase. Ample provision should be made for advertising, and this should be considered in conjunction with the scheme of decoration. Attention should also be paid to the following essential conditions:—

Centralization of control.

Despatch in dealing with large crowds.

Cleanliness and durability of materials.

Drawings required:—

$\frac{1}{2}$ -inch scale plan, cross section and front elevation.

$\frac{1}{2}$ -inch detail of a portion of main front.

(b) Working drawings for Subject No. LXXXVI(a), *A Shop Front*.

The design for a Shop Front may, after it has been approved, be re-submitted with the addition of complete $\frac{1}{2}$ -inch details of the elevation, section and plan of Shop Front, to include also bulkhead construction and vaults under pavement, and one bay of reinforced concrete flooring to shop.

LXXXIX

(a) A *Small Housing Scheme*. In a Suffolk village of about 1,000 inhabitants there is need for 30 new cottages; half are for agricultural labourers, the other half for village artisans and labourers. The cottages are to be erected under a housing scheme with the aid of a subsidy under the 1924 Housing Act.

The village street runs East and West and is fairly level. On the north side of this street at the Western end of the village is a rectangular field sloping upward from the road at a grade of about 1 in 15. There is a frontage of about 450 feet to the road which is straight. The field contains 8 acres, the whole of which is available for the houses, gardens, etc. The North side of the field is bounded by a wood and common, to which access from the main road must be given for pedestrians and for occasional use by carts. On the South side of the road, on the central axis of the field, is the entrance to a large country house and park.

Drawings required:—

A lay-out plan of the whole to the scale of $\frac{1}{1000}$.

Detail lay-out plan and plans of the houses fronting the main road with elevation of the whole of that frontage to a scale of 16 feet to 1 inch.

Complete plans, sections and elevations of one of the blocks of cottages to a scale of 8 feet to 1 inch.

All the dwellings to be of such sizes, accommodation and economical design that they may be eligible for the Government subsidy.

Two small village shops must be incorporated in the scheme.

(b) Working drawings for Subject No. LXXXVII, *A Grand Staircase of a City Hall*.

The design for a Grand Staircase of a City Hall may, after it has been approved, be re-submitted with the addition of :—
 $\frac{1}{2}$ -inch scale details of section and part plan sufficient to show materials and construction.

XC

(a) A design for a *Concert Hall*. The Concert Hall is to be erected in an inland "Spa" such as Bath or Buxton, a town which would have sufficient visitors to justify the provision of an attractive site for the building.

The site is rectangular in shape with a frontage of 250 feet to a main road running East and West, and 300 feet to a side road running North and South.

The South side overlooks a valley and river.

The site is level for 200 feet, then falls steeply to the valley.

The portion not covered by the building is to be laid out as lawns, gardens, etc.

Accommodation required :—

Concert Hall to seat 750 persons.

Space for an orchestra of 80 performers.

A small organ.

A Green Room for Artists.

Dressing Rooms for musicians and soloists of both sexes.

Lavatories for both sexes (artists).

Large entrance hall with Box or Ticket Office.

Cloak rooms, lavatories for both sexes.

A refreshment room to seat 250 persons, with kitchen accommodation and the necessary services.

Drawings required :—

To 1/16 scale, plans, 2 elevations and 1 section.

Note.—Students are to pay special attention to acoustics and to avoid circular or elliptical plans for the Concert Hall.

(b) Working drawings for Subject No. LXXXVIII, *A Suburban Electric Railway Station*.

The design for the Railway Station may, after it has been approved, be re-submitted with the addition of complete $\frac{1}{2}$ -inch details of booking hall including plan.

Dates for Submission of Designs in 1926.

Subject	LXXXV	27 Feb.	Subject	LXXXVIII	31 Aug.
"	LXXXVI	30 Apr.	"	LXXXIX	30 Oct.
"	LXXXVII	30 June	"	XC	31 Dec.

REGISTRATION AS PROBATIONER, R.I.B.A.

Special attention is called to the fact that, except in very special cases, a Headmaster's Certificate will not be accepted after 1 October 1927, and no one will be registered as a Probationer of the R.I.B.A. unless that person has passed one of the recognised examinations in the required subjects.

A list of the examinations recognised may be obtained free at the R.I.B.A.

R.I.B.A. (ANDERSON AND WEBB) SCHOLARSHIP
AT THE SCHOOL OF ARCHITECTURE,
UNIVERSITY OF CAMBRIDGE.

The R.I.B.A. (Anderson and Webb) Scholarship, £70 a year, will be tenable for three years from October, 1926.

Full particulars may be obtained from E. Bullough, Esq., Gonville and Caius College, Cambridge, on application before the 1st February 1926.

Notices

THE SEVENTH GENERAL MEETING.

The Seventh General Meeting (Ordinary) of the Session 1925-26 will be held on Monday, 1 February 1926, at 8.30 p.m., for the following purposes :—

To read the Minutes of the General Meeting (Ordinary) held on 18 January 1926 ; formally to admit members attending for the first time since their election or transfer.

The President, Mr. E. Guy Dawber, F.S.A., to deliver his address to students and to present the Prizes and Studentships awarded by the Council for 1926.

R.I.B.A. PAMPHLET ON "THE ARCHITECT AND HIS WORK."

The attention of members is specially called to the pamphlet on "The Architect and His Work," enclosed with this copy of the JOURNAL.

The pamphlet was compiled by the Practice Standing Committee with the assistance of the late Mr. Paul Waterhouse, Past President, and has been issued by the Council with a view to bringing before the general public the functions of an architect and his use to the community.

Members can obtain further copies of the pamphlet for circulation to their friends, on application to the undersigned, at a cost of 2s. 6d. per dozen.

ELECTION OF MEMBERS, 7 JUNE 1926.

Associates who are eligible and desirous of transferring to the Fellowship class are reminded that if they wish to take advantage of the election to take place on 7 June 1926, they should send the necessary nomination forms to the Secretary R.I.B.A. not later than 1 April 1926.

LICENTIATES AND THE FELLOWSHIP.

The attention of Licentiates is called to the provisions of Section IV, clause 4 (b) and (cii), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

R.I.B.A. REGISTRATION COMMITTEE.

Meetings of the R.I.B.A. Registration Committee are now being held at No. 28, Bedford Square, London, W.C.1, the premises lately occupied by the Society of Architects. All communications in connection with the Committee should be addressed to Mr. C. McArthur Butler, Secretary to the Registration Committee, at that address.

ELECTION OF MEMBERS.

15 FEBRUARY, 1926.

An election of members will take place at the Business General Meeting on 15 February 1926. The names and addresses of the Candidates (with the names of their proposers), found by the Council to be eligible and qualified for membership according to the Charter and Byelaws and recommended by them for election, are as follows :—

AS FELLOWS (20).

ALLCOCK : EDWARD THOMAS [A. 1896], 12, Baxter Gate, Loughborough ; Ashfield, Ashby Road, Loughborough. Proposed by Arthur H. Hind, J. Stockdale Harrison, Clement Stretton.

FREAD : HORACE CHARLES [A. 1905], Portsmouth Road, Esher ; Millmead, Lower Green, Esher. Proposed by A. Jessop Hardwick, James Ransome, Henry A. Crouch.

GOLD : HUGH ANDREW, M.C. [A. 1913], 14, Bedford Row, W.C.1 ; 31, Christchurch Road, Streatham Hill, S.W.2. Proposed by Owen C. Little, J. E. Dixon-Spain, Robert Lowry.

GOLDSMITH: MAJOR GEORGE HARTLEY, M.C. [*A.* 1907], Headquarters, Imperial War Graves Commission, St. Omer, France; "Odstone," Rhos-on-Sea, North Wales. Proposed by Paul Ogden, Sir Edwin L. Lutyens, R.A., Albert J. Thomas.

HAMPSON: JOSEPH LOUIS [*A.* 1910], 10, Richmond Terrace, Blackburn; 360, St. Helens Road, Bolton. Proposed by Harry Vernon Wolstenholme, John Bradshaw Gass, Arthur J. Hope.

HUGHES: THOMAS HAROLD, A.R.C.A. (Arch. London), F.S.I., F.R.G.S., [*A.* 1911], 157, Renfrew Street, Glasgow; 27, Ashton Road, Glasgow. Proposed by Geo. And. Paterson, Sir John J. Burnet, A. Marshall Mackenzie.

NEWNUM: ERIC GEORGE [*A.* 1910], State Buildings Department, Ministry of Public Works, Cairo; 1, Sharia el Walda, Kasr el Doubara, Cairo, Egypt. Proposed by George Drysdale and the Council.

ROBERTSON: ALEXANDER ROBERT [*A.* 1902], 91, Brick Lane, E.1; "Nutbourne," Leigh Cliff Road, Leigh-on-Sea, Essex. Proposed by R. H. J. Mayhew, W. R. Davidge, W. Gillbee Scott.

SCOTT: ERIC WILFRID BONING [*A.* 1912], 24, Castle Meadow, Norwich; Hill Cottage, Harvey Lane, Thorpe St. Andrew, Norwich. Proposed by Edw. T. Boardman, E. Guy Dawber, George J. Skipper.

SCOTT: THEODORE GILBERT, M.C. [*A.* 1914], 24, Castle Meadow, Norwich; Littlewood, Harvey Lane, Thorpe St. Andrew, Norwich. Proposed by Edw. T. Boardman, E. Guy Dawber, Mervyn E. Macartney.

TAIT: THOMAS SMITH [*A.* 1913], 1, Montague Place, Bedford Square, W.C.2; 48, Rotherwick Road, Golders Green, N.W.11. Proposed by Sir John J. Burnet, E. Stanley Hall, Robert Atkinson.

TAYLOR: SAMUEL POINTON [*A.* 1908], Ministry of Health, Whitehall, S.W.; 62, Roxeth Hill, Harrow-on-the-Hill. Proposed by Dr. Raymond Unwin, E. C. P. Monson, Louis de Soissons.

TETLEY: CHARLES REGINALD [*A.* 1913], 240, Beaver Hall Hill, Montreal; 4, 291, Montrose Avenue, Westmount, P.Q., Canada. Proposed by Philip J. Turner, Geo. A. Ross, Kenneth G. Rea.

WESTWOOD: PERCY JAMES [*A.* 1904], 7 and 8, Adam Street, Adelphi, W.C.2; "Nutfield," Weybridge, Surrey. Proposed by Sir Banister Fletcher, J. W. Stanley Burmester, Osborn C. Hills.

And the following Licentiate, who are qualified under Section IV, Clause C (ii), of the Supplemental Charter of 1925:—

ANDERSON: ARTHUR ERNEST, 3,299, St. Adele Avenue, Montreal, P.Q., Canada. Proposed by Kenneth G. Rea, Percy E. Nobbs, Geo. A. Ross.

FINLAYSON: WILLIAM, Strathearn Lodge, Crieff, Perthshire. Proposed by the Council.

PRITCHETT: HERBERT DEWES, 12, High Row, Darlington; 9, Elton Parade, Darlington. Proposed by W. J. Moscrop, Percy Robinson, H. S. Chorley.

And the following Licentiate who have passed the qualifying examination:—

CLELAND: JOHN STOCKWIN, M.B.E., Chief Government Architect, Union of South Africa, Public Works Department, Union Buildings, Pretoria, South Africa. Proposed by J. Lockwood Hall, Franklin K. Kendall, Albert J. Thompson.

SUDBURY: HARRY TATHAM, Rutland Chambers, Ilkeston; Wayside, Longfield Lane, Ilkeston. Proposed by George H. Widdows, T. H. Thorpe, A. Ernest Heazell.

THRIVES: ALFRED JOHN, 12, Victoria Street, Nottingham; "Wolds Cot," Plumtree, Notts. Proposed by F. W. C. Gregory, A. Ernest Heazell, A. Nelson Bromley.

AS ASSOCIATES (6).

ALI: S. AZIZ [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], New Lane, Hyderabad, Deccan, India. Proposed by Howard Robertson, Robert Atkinson, W. E. Vernon Crompton.

ALSO: GEORGE HATHERLEY [Final], 29, Thornton Street, Kew, Melbourne, Australia. Proposed by Rodney H. Alsop, Frank T. Verity, C. E. Varndell.

BARNES: THOMAS SCOTT [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], Morden Lodge, Morden, Surrey. Proposed by J. Alan Slater, Major Harry Barnes, W. R. Davidge.

BHUTA: GOPALJI MULJI [Final], c/o Messrs. Gregson, Batley and King, Chartered Bank Building, Fort, Bombay, India. Proposed by C. E. Varndell, Arthur Stratton and the Council.

MEIKLE: EDYTH [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], 27, Parliament Hill, Hampstead, N.W.3. Proposed by Howard Robertson, Robert Atkinson, Geoffry Lucas.

SILCOCK: FRANCES THELMA [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], The Cross, Huyton, Liverpool. Proposed by Professor C. H. Reilly and the Council.

AS HON. FELLOW (1).

DICKSEE: SIR FRANK, P.R.A., 3, Greville Place, N.W.6. Proposed by the Council.

AS HON. ASSOCIATE (1).

GRIGGS: FREDERICK LANDSEER MAUR, A.R.A., Campden, Gloucestershire. Proposed by the Council.

29 MARCH 1926

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 15 February 1926.

AS FELLOWS (10)

LIVOCK: STANLEY GAGE [*A.* 1910], 22 Surrey Street, Strand, W.C.2, and at Norwich; Meadway, Horsell Rise, Woking.

MILBURN: STANLEY WAYMAN, M.C. [*A.* 1913], 19 Fawcett Street, Sunderland; 4 Ashmore Terrace, Sunderland.

MILBURN: WILLIAM, JUNR., B.Sc., F.S.I., [*A.* 1910], 19 Fawcett Street, Sunderland; 23 Valebrooke Avenue, Sunderland.

MOORE: MAJOR FREDERICK WILLIAM, D.S.O., M.C. [*A.* 1912], Queensgate Chambers, Bradford, and Station Buildings, Keighley; Hillside, Riddlesden, Keighley.

PHILLIPS: REES [*A.* 1913], 9 Bentinck Street, Manchester Square, W.1; 84 Hamilton Terrace, N.W.8.

And the following Licentiate, who are qualified under Section IV, Clause C (ii) of the Supplemental Charter of 1925:—

BECKWITH: HENRY LANGTON, F.S.I., 3 Cook Street, Liverpool; Sandown Park, Wavertree, Liverpool.

CHADWICK: MAJOR JOHN, T.D., Bletchley, Bucks.

FAUNCH: FREDERICK GEORGE, 76 Cranbrook Road, Ilford, Essex.

WADDINGTON: FREDERIC TURNER, 52 Abingdon Street, Blackpool; 127 Hornby Road, Blackpool.

WALSH: JOSEPH FREDERICK, F.S.I., 10 Harrison Road, Halifax; Savile Green, Halifax.

AS ASSOCIATES (33)

- BLIZZARD: HENRY GEORGE [Special], 8 Elmwood, Welwyn Garden City, Herts.
- BROOKFIELD: GEORGE PIERS, B.Litt.Oxon., B.Sc. (in Architecture), of the Massachusetts Institute of Technology [Exempted from Final Examination], 19 Rue de Lille, Paris, France.
- BURTON: JOHN [Special], 71, West Parade, Mount Pleasant, Stoke-on-Trent.
- CASTELLINO: SYLVESTER JOSEPH TRINITY D'SOUZA [Special], c/o Messrs. J. A. Castellino & Co., 328 Sachapeer Street, Poona, India.
- COOMBS: ROBERT EDWIN MONTAGU [Final], Cathedral School, Llandaff, Cardiff.
- COOPER: WILLIAM REGINALD ROYDON [Special], 17 New Street, Shrewsbury.
- CURRIE: MURDOCH [Passed five years' course at Glasgow School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 250 Paisley Road W., Glasgow.
- DANN: CLIFFORD HORACE [Final], 66 Trinity Street, Norwich.
- DOYLE: STANLEY HODGSON [Special], Calverley Chambers, Victoria Square, Leeds.
- GRAY: CHARLES CLARE [Final], 81 Sutton Crescent, Walsall.
- GREEN: CHRISTOPHER, B.A.Oxon. [Final], 83 Gunterstone Road, Baron's Court, W.14.
- GREEN: RALSTON TILSLEY [Final], 11 Dents Road, Wandsworth Common, S.W.11.
- HARLEY: THOMAS [Final], 15 Dewar Street, Dunfermline.
- KEMP: CECIL GEORGE [Special], Bridge Road, Welwyn Garden City, Herts.
- KIMBER: CHARLES FRANK, M.C. [Special], 39 Head Street, Colchester.
- LIPSON: SAMUEL [Final], c/o James Miller, Esq., A.R.S.A., 15 Blythwood Square, Glasgow.
- McKEWAN: ARTHUR MALCOLM [Final], 27 Somerset Road, Handsworth Wood, Birmingham.
- MESSENT: CLAUDE JOHN WILSON [Final], 34 Mile End Road, Norwich.
- MOORE: JOHN ROBERT [Special], 13 Acland Road, Willesden Green, N.W.2.
- PALMER: PHILIP EVANS [Special], 25 Royal Avenue, Chelsea, S.W.3.
- PARAMOR: FRANK WILLIAM [Final], "Hillsborough," Selsdon Village, Sanderstead, Surrey.
- PASHEN: JOHN HERBERT [Special], "Ujiji," Dorchester Road, Weymouth.
- PATKER: PURUSHOTTAM MUKUND [Passed five years' course at London University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], Harvey Road, Gamdevi, Bombay, India.
- POUSHKINE: BARBARA [Passed five years' course at London University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 52 Lancaster Gate, W.2.
- ROWSE: ERIC ANTHONY AMBROSE [Special], Flat 4, St. Stephen's House, St. Stephen's Square, Bayswater, W.
- SIMPSON: DOUGLAS JAMES [Final], 51 Downs Park West, Bristol.
- THOMAS: BRYAN WILLIAM RYLANDS [Passed five years' course at Cardiff Technical College. Exempted from Final Examination after passing Examination in Professional Practice], Briar Dene, North Road, Cardiff.
- VINE: RONALD OWEN [Final], 7 Whymark Avenue, Wood Green, N.22.
- WATSON: EDWIN [Final], 86 Orchard Road, Erdington, Birmingham.

WELSH: OLIVER MARTIN [Passed five years' course at London University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 38 Pattison Road, N.W.2.

WILDE: GEORGE [Final], 56 Arkwright Street, Bolton.

WILFORD: CHARLES EDMUND [Special], "Wychwood," Taunton Road, Leicester.

WINTER: PERCY HAROLD, P.A.S.I. [Special], 25 Pollards Wood Road, S.W.16.

AS HON. ASSOCIATE (1)

BATSFORD: HARRY, "Hedge Bank," 25 Russell Gardens Golders Green, N.W.11.

Competitions

BLACKPOOL MEMORIAL CLOCK TOWER.

The Corporation of Blackpool invite competitive designs for a Clock Tower with drinking fountain, to be erected in the new park. Assessor, Mr. E. Bertram Kirby, O.B.E. [F.] Designs to be sent in not later than Saturday, 13 February 1926. Conditions may be obtained from The Town Clerk, Town Hall, Blackpool, by depositing £1 is., which will be returnable if a *bona fide* design has been submitted.

MANCHESTER TOWN HALL EXTENSION.

The President of the Royal Institute of British Architects has appointed Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A., to act as a Jury of Assessors in connection with this competition.

PROPOSED NEW PARISH CHURCH,
NEWBRIDGE, MONMOUTHSHIRE.

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members are advised to take no part in the competition.

COMPETITION FOR LARGER OFFICES.

WEST BROMWICH PERMANENT BENEFIT BUILDING
SOCIETY.

The President of the Royal Institute of British Architects has nominated Mr. W. Alexander Harvey, F.R.I.B.A., as assessor in this competition.

TOPSHAM PUBLIC HALL COMPETITION.

Premiums of £50, £40 and £30 respectively are offered in the above competition. Assessor, Mr. Walter Cave [F.] Last day for questions, 1 January 1926. Designs to be sent in by 1 April 1926. Conditions may be obtained from the Clerk to the Parish Council, Topsham, by depositing £1 is.

BIRKENHEAD NEW ART GALLERY
COMPETITION.

Proposed new Art Gallery and Museum, Birkenhead. Premiums offered £250, £175 and £100 respectively. Assessor, Sir Robert Lorimer, A.R.A., R.S.A. [F.] Competition restricted to competitors practising as architects and being resident, or having an office within twenty miles of the Birkenhead Town Hall for the twelve

months at least prior to 1 January 1924. Conditions may be obtained from E. W. Tame, Town Clerk, Birkenhead, by depositing £2 2s.

RECONSTRUCTION OF THE MOSQUE OF AMROU COMPETITION, CAIRO.

Members of the Royal Institute who are considering taking part in the above competition are strongly recommended to consult the Secretary R.I.B.A. before deciding to compete.

LEAGUE OF NATIONS.

COMPETITION FOR THE SELECTION OF A PLAN WITH A VIEW TO THE CONSTRUCTION OF A CONFERENCE HALL FOR THE LEAGUE OF NATIONS AT GENEVA.

The League of Nations will shortly hold a competition for the selection of a plan with a view to the construction of a Conference Hall at Geneva. The competition will be open to architects who are nationals of States Members of the League of Nations.

An International Jury consisting of well-known architects will examine the plans submitted and decide their order of merit.

A sum of 100,000 Swiss francs will be placed at the disposal of the Jury to be divided among the architects submitting the best plans.

A programme of the competition when ready will be despatched from Geneva, and Governments and competitors will receive their copies at the same time. Copies for distant countries will be despatched first.

The British Government will receive a certain number of free copies. These will be deposited at the Royal Institute of British Architects, and application should be made to the Secretary, R.I.B.A., 9 Conduit Street, W.1, by intending competitors.

Single copies can be procured direct from The Secretary-General of the League of Nations at Geneva, for the sum of 20 Swiss francs, payable in advance, but will not be forwarded until after the Government copies have been despatched.

On the nomination of the President of the Royal Institute, Sir John Burnet, A.R.A., has been appointed as the British representative on the Jury of Assessors.

AUSTRALIAN WAR MEMORIAL—CANBERRA.

Competitive designs are invited for the Australian War Memorial at Canberra.

The competition is open to architects of Australian birth, wherever located, and in order that competitors who are abroad may be placed on the same footing as those in Australia, the conditions governing the competition will not be available in Australia until 15 August, at which date they will be available at the office of the High Commissioner, Australia House, Strand.

To ensure that the same working time is allowed to all competitors, the competition will close simultaneously in Australia and London on 31 March 1926, up to noon, on which date designs from architects in Europe will be received at the office of the High Commissioner in London.

Intending competitors should communicate with the Official Secretary to the Commonwealth of Australia, Australia House, Strand, W.C.2.

Members' Column

MR. MANNING ROBERTSON.

MR. MANNING ROBERTSON [A.] has transferred his practice to Provincial Bank Chambers, 3 and 4 College Street, Dublin (Telephone, Dublin 2016).

His English practice will be carried on in co-operation with Mr. Geoffrey Fildes [A.], of 73, St. George's Road, London, S.W.1.

FORMATION OF PARTNERSHIP.

MESSRS. J. S. GIBSON and W. S. A. GORDON have taken into partnership Mr. James M. Wilson, A.R.I.B.A., formerly director of Public Works, Baghdad, and the new firm will carry on practice at 5 Old Bond Street, W.1.

FLAT TO LET.

MEMBER has unfurnished flat in his own house to let. Entirely self-contained with own front door and small forecourt. It contains one large sitting-room, two small bedrooms, kitchen, bathroom, with geyser, etc., and is situated in a delightful old square three minutes from Stamford Brook Station D.R. Rent, £90 per annum. Reply Box 1116, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes VI

SESSION 1925-1926.

At the Sixth General Meeting (Ordinary) of the Session 1925-1926, held on Monday, 18 January 1926, at 8 p.m., Mr. E. Guy Dawber, F.S.A., President, in the chair.

The attendance book was signed by 31 Fellows (including 20 members of the Council), 22 Associates (including 4 members of the Council), 2 Licentiates (including 1 member of the Council), and a large number of students and visitors.

The minutes of the meeting held on 4 January 1926, having been published in the JOURNAL, were taken as read and signed as correct.

The following member attending for the first time since his election was formally admitted by the President:

MR. F. HALLIWELL SHANN [F.].

The Secretary announced that the Council had nominated for election to the various classes of membership the candidates whose names are published in this issue of the JOURNAL.

The Secretary having read the Deed of Award of Prizes and Studentships, made by the Council under the Common Seal, the sealed envelopes bearing the mottoes of the successful competitors were opened and the names disclosed.

Mr. H. S. Goodhart-Rendel [F.] read a review of the works submitted for the Prizes and Studentships, 1926.

Professor E. A. Gardner, Litt.D., Vice-Chancellor of the University of London, moved, and Professor Leslie Wilkinson [F.] seconded, a vote of thanks to Mr. Goodhart-Rendel, which was passed by acclamation.

Mr. Goodhart-Rendel briefly responded.

The proceedings closed at 9.10 p.m.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expression of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL.

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